A Study of Customers' Willingness to Purchase Organic Fresh Milk in Thailand

Miss Jeerawan Punwaree

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By	Miss Jeerawan Punwaree
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Thesis Advisor	Assistant Professor Natt Leelawat, D.Eng.
Thesis Co Advisor	Jing Tang, D.Eng.

Accepted by the FACULTY OF ENGINEERING, Chulalongkorn University in Partial Fulfillment of the Requirement for the Master of Engineering

..... Dean of the FACULTY OF ENGINEERING

(Professor SUPOT TEACHAVORASINSKUN, D.Eng.)

THESIS COMMITTEE

..... Chairman

(Associate Professor JEERAPAT NGAOPRASERTWONG)

..... Thesis Advisor

(Assistant Professor Natt Leelawat, D.Eng.)

..... Thesis Co-Advisor

(Jing Tang, D.Eng.)

..... Examiner

(Assistant Professor Napassavong Osothsilp, Ph.D.)

..... External Examiner

(Associate Professor Chawalit Jeenanunta, Ph.D.)

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ในปัจจุบันผู้บริโภคส่วนใหญ่มักจะหันมาดูแลเรื่องสุขภาพมากขึ้น อันเนื่องมาจากสถานการณ์โรคระบาด COVID-19 และผู้บริโภคบางคนที่มีต้องการบริโภคสินค้าที่มีประโยชน์ ผลิตภัณฑ์จากนมเป็นสินค้าที่มีผู้บริโภคหลากหลายช่วงอายุ ตั้งแต่เด็ก วัยรุ่น ผู้ใหญ่ จนถึงวัยชรา นมอินทรีย์จึงเป็นอีกหนึ่งทางเลือกที่เหมาะสมกับผู้รักสุขภาพ เนื่องจากนมอินทรีย์นั้นเป็นผลิตภัณฑ์ที่จะต้องได้รับการรับรองมาตรฐานจากหน่วยงานของรัฐ นอกจากนี้ยังมีการศึกษาที่พบว่านมอินทรีย์มีประโยชน์มากกว่านมโคทั่วไป โดยการศึกษานี้ได้นำทฤษฎีพฤติกรรมตามแผน (TPB) มาประยุกต์เพื่อศึกษาปัจจัยต่างๆ ที่ส่งผลกระทบต่อความเต็มใจซื้อนมอินทรีย์พร้อมดื่มของผู้บริโภค ผ่านวิธีการทำแบบสอบถาม และทำการทดสอบโมเดลสมการโครงสร้างแบบวิธีกำลังสองน้อยที่สุดบางส่วน ผลการทดสอบผู้บริโภคทั้งสิ้น 418 ราย พบว่าปัจจัยที่มีผลต่อการศึกษาทั้งสิ้น 7 ปัจจัย ดังนี้ 1) ทัศนคติต่อพฤติกรรมส่งผลต่อการเต็มใจซื้อ 2) การคล้อยตามกลุ่มอ้างอิงส่งผลต่อการเต็มใจซื้อ 3) ข้อมูลบนผลิตภัณฑ์ส่งผลต่อทัศนคติ 4) จริยธรรมและสวัสดิภาพสัตว์ส่งผลต่อทัศนคติ 5) โรคระบาดไวรัสโคโรน่าส่งผลต่อทัศนคติ 6) สื่อสังคมออนไลน์ส่งผลต่อการคล้อยตามกลุ่มอ้างอิง และ 7) ราคาสินค้าส่งผลต่อการรับรู้ความสามารถในการควบคุมพฤติกรรม นอกจากนี้ผลการศึกษาแสดงให้เห็นถึงราคาของความเต็มใจซื้อเพิ่มขึ้นในราคาระหว่าง 12.18 - 21.18 บาทต่อนมพร้อมดื่มอินทรีย์ขนาด 200 มิลลิลิตร

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Nowadays, most consumers often are care about health due to the COVID-19 and personal needs. Dairy products are specific products that are generally consumed by every age group, from children, teenagers, adults, to the elderly. Organic milk could provide an advantageous alternative for health conscious consumers as it must be certified by government agencies prior to market launching. There are many studies supported that organic milk is more beneficial than conventional milk. Theory of Planned Behavior (TPB) was applied to study the factors affected consumers' willingness to purchase organic fresh milk in Thailand. Through the questionnaire method and analysis by using the Partial Least Square Structural Equation Modelling, the result collected from 418 consumers reveals that there are seven significant factors as follows: 1) Attitudes toward behavior significantly affect the willingness to purchase 2) Subjective norms significantly affect the willingness to purchase 3) Information on product labels significantly affects the attitudes toward behavior 4) Ethics and animal welfare affects the attitudes toward behavior 5) COVID affects attitudes towards behavior 6) Social media affects subjective norms and 7) Price of goods affects perceived behavioral control respectively. Moreover, it shows the price of customers' willingness to purchase is varied from THB 12.18 to 21.18 for a 200 c.c. bottle of organic fresh milk.

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Jeerawan Punwaree

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

Glossary

No	Word	Definition
1	Organic fresh milk	"Dairy products from farms that are concerned about environment, animal welfare, and feed and farming management. Moreover, dairy animals spend much more time in open areas with organic supplementary food that does not add chemical fertilizer or biofertilizer. Regarding this, positive effects are found in animals as they are healthy and less stressed. The production of organic milk has to be under control to prevent chemical contamination along with assurance of organic food operation and standard to maintain the condition/quality of the product" (Department of Livestock Development, 2010). *Note*. The organic fresh milk excludes milk powder.
2	Organic farming	"A farm that adapts for the number of animals, providing a good environment. For example, translucent, clean, spacious and separate zoning to exercise, rest, and pump breast milk. Drug and chemical use is avoided (Department of Livestock Development, 2010). Moreover, it includes concepts such as freshness, nutritional value, simple and healthy meals, traceable local supply, and additives and preservatives avoidance" (Wier, Jensen, Andersen, & Millock, 2008).

Glossary (Continued)

No	Word	Definition
3	Animal welfare	"The farm management using policies, for example, more space in corrals, canceled dehorning, and free-range living. This helps reduce stress in animals. Limits of medical usage and process control production were set by the EU and US union in 2000. According to this, an idea of animal welfare was established. There are changes in operation and policy used with livestock such as product labeling to assure standard" (Department of Livestock Development, 2010)
4	Ethic	"The working process is impartial and does not take advantage of the organic price, the organic feeder, the organic policy and the dairy animal, etc" (Chinvinijkul, 2014).

Chapter 1 Introduction

This chapter shows the research background about the customers and their purchasing of behavior standard organic food products in Thailand. The objectives, scopes, expected outcomes, expected benefits, and the research structure of this study are included in this chapter as well.

1.1 Background and reasons of customer to purchase product

Insufficiency of organic milk production in the Thailand market would motivate farmers to change their farms to organic farms. In 2018, Thailand imported over THB 20,000 million of dairy products reported by the Dairy Farming Promotion Organization of Thailand (D.P.O.). This expert organization has been conducting researches and experiments on organic farms since 2007, with the certificate granted by the Department of Livestock Development (DLD) in 2011. In 2019, D.P.O. found that customers' demand in Thailand were around 3 tons per day, but we could produce only 0.7 tons per day (Thairath Online, 2019). In (2020), Thailand had 14 organic milk farms that could produce 5 tons of organic milk dairy. The organic milk market in Thailand had positively affected environmental friendliness, animal welfare, and decreased health problems (ThaiPR.net, 2019). All of which conveyed positive knowledge about the organic milk market. At present, people care more about health and are more careful in selecting food with less chemical contamination. In addition, organic milk production can reduce pesticide use and contain more minerals (Cederberg & Mattsson, 2000). Furthermore, according to the eutrophication potential, which is lower in organic than inorganic herds, the calcium and magnesium found in organic herd milk are also suitable for customers (Hanuš et al., 2008). Therefore, the number of consumers who favor organic food would increase as long as a producer can supply the current organic food to markets (NawaChione Foundation, 2020).

The loss of profit and the extra investment are caused by the long preparation for organic farming (Thairath Online, 2019). Organic farming has a positive impact on the livestock system, animal feeding, forage management, reproduction behavior, and animal health in particular. They discussed animal welfare, product quality, environmental issues, and the financial results of organic dairy farming (Hanuš et al.,

2008). Although organic farming provides a lot of benefits, it yields lower production during the initial preparation period. Samples of possible factors that lessen organic milk production are as follows;

1) Organic farming must raise only cattle breeder.

2) While the dairy production would take at least 90 days for adjustment. The organic provender has to be prepared for more than 12-18 months and comprises more than 90 percent of feeding to cattle.

3) Animal welfare management can help reduce stress and increase animals' immunity. For example, they use open-field grazing, treat with pure herbal medicine, and do not sell milk while the cattle take medications.

4) Due to animal welfare, only natural breeding is allowed. D.L.D. must accept particular activities such as earmarking and dehorning.

5) Farm and dairy products must be compatible with geography and cattle behavior and provide sufficient circulatory water and feeding.

6) Agricultural waste management is controlled by avoiding burning and exterminating natural resources (Department of Livestock Development, 2010).

Despite many specifications, sustainable benefits are given to the cattle, environment, agriculturists, and consumers as follows.

The benefit to the dairy animals – health and animal welfare: dairy control management focuses on physical form and behavior of animals by letting cattle live in a natural habitat with adequate food and water. Also, staying in natural environment reduces stress, and antibiotic usage (Department of Livestock Development, 2010) and allows animal welfare (Coppa et al., 2013). These can mitigate somatic cells resulted from farming management, which is against contamination in the living area. In addition, Ultraclean would decrease bacterial contamination and mastitis (Čuboň et al., 2008; Garmo, 2010).

The benefit to the environment–land: Maintain biological diversity in ecology results from the balanced number of cattle on the ground, which will help prevent land destruction and natural pollution. (Department of Livestock Development, 2010). In addition, the management of agricultural wastes can protect against chemical contamination, which is suitable for soil substances (Department of Livestock Development, 2010).

The benefit to the farmers–physical health condition, cost, selling price: farmers are less exposed to chemical use which is a consequence of organic farming that farmers can do in parallel with livestock farming (Department of Livestock Development, 2010). These will reduce feeding costs and increase the selling price (NET, 2019).

The benefit to the consumers' healthiness: Omega 3 added products from the organic farm can reduce blood triglyceride levels, while Omega 6 prevents coronary heart disease (Candela, López, & Kohen, 2011). Moreover, the Conjugated Linoleic Acid (CLA) lessens the rate of arteriosclerosis (Bhattacharya, Banu, Rahman, Causey, & Fernandes, 2006) and cancer risk (Dilzer & Park, 2012).

Planning Division Department of Livestock Development 2017 – 2021 declared with confidence that producers would be developing organic products in the future. So, they have some strategies, for example, to establish the potential for organic production, to promote and to develop markets for goods and services related to organic agriculture, and publicize organic agriculture to consumers (Department of Livestock Development, 2010). Thailand's 20-year Agricultural Development Strategy aims to have efficient agrarian products and agricultural standards for sustainability. Thailand policy 4.0 aims to promote farmers' security, prosperous agriculture, and sustainable agricultural resources (Prachuap Khiri Khan provincial livestock office, 2018). The D.P.O. believes that "demand for organic products would increase, and their market share in Thailand would likely increase too". Therefore, D.P.O. is developing researches on organic milk. In the productivity part, they expand it and promote a selling price of THB 28 – 30 per liter, which is about THB 10 more expensive than

conventional milk per liter. Although organic milk process has higher production costs and gets a lower quantity of liquid, it has a different profit from the higher selling price (Siamrath, 2018). The Farming Promotion Organization of Thailand study reported that about 65.80 % of farmers in the northern region of Thailand were ready to comply with regulations for running organic agriculture. Most of these farmers need organic milk promotion (Sompakdi, Phonprapai, & Sindecharak, 2014).

Certification or standardization is a requirement for individual consumers' willingness to purchase organic milk. International standards such as JAPANESE AGRICULTURAL STANDARDS (JAS), ECOCERT, EU leaf, and United States Department of Agriculture (USDA) require organic products containing 95% organic ingredients under organic manufacturing. There are official standards for organic milk in Thailand such as Organic Agriculture Certification Thailand (ACT), National Bureau of Agricultural Commodity and Food Standards (ACFS), The Northern Organic Standard Organization, Participatory Guarantee System (PGS), and Agricultural Commodity and Food Standards (ACFS) (NawaChione Foundation, 2020). Organic milk in Thailand has passed international standards. The label attached to the product container identifies the approved standard. Examples of Organic Standards in Thailand are shown in **Table 1.1.**

Table 1.1 Examples of Organic Standards in Thailand

No	Standard	Description
1		Organic Agriculture Certification Thailand
2		DLD organic Thailand
3		Bioagricert
4		Organic Agriculture Certification Thailand

Table 1.1 Examples of Organic Standards in Thailand (Continued)

No	Standard	Description
5		The Northern Organic Standard Organization
6		Surin Organic
7		Phetchabun Organic
8		Participatory Guarantee System
9		Agricultural Commodity and Food Standards

Note. Source: "Samples of Well-Known Certified Organic Product Labels in Thailand" by NawaChione Foundation. (2020). Retrieved Mar 2020, from https://1th.me/kfTop.

Only the organic lovers understand the background knowledge of organic products well. On the other hand, another group of customers is thinking that organic products are not attractive. Most consumers would like to purchase them because they are good for health (GREENNET, 2019).

1.2 Research Objectives

1.2.1 To determine the level of customers' willingness to purchase organic fresh milk in different demographic groups in Thailand.

1.2.2 To identify the factors that affect the customers' willingness to purchase organic fresh milk.

1.3 Scope

This study was conducted with the subjects, age groups between 20 - 60 years old in 6 different provinces: Bangkok, Khon Kaen, Chonburi, Chiang Mai, Nakhon Ratchasima, and Phuket. The number of sample was 200 people in Bangkok and 50 people per each selected province. The online questionnaire were contributed to the screened consumers who have drunk organic milk before and who frequently buy organic milk.

1.4 Expected Outcomes

1.4.1 The study could identify factors affecting the willingness to purchase organic fresh milk.

1.4.2 The study could identify the interaction among the factors affecting the willingness to purchase organic fresh milk.

1.5 Expected Benefits

1.5.1 The research could ensure consumers of the organic milk benefit for good health and also promote organic milk industry.

1.5.2 The research would suggest trend customer for further studies related to this research in complying with government policy such as Thailand's Smart Farming policy.

1.5.3 The research would help develop methods of study about willingness to purchase other organic products in Thailand.

1.5.4 The research would benefit sellers or marketers in Thailand; in preparing the organic products for sale after knowing the demand.

1.6 Research structure

This study is organized by research structure as follows; starting with the explanation of the trends and market background to gather previous research's information. Next, providing the factors from a literature review regarding the theory and hypotheses of this study. After that, presenting the development of the questionnaire survey based on factor and analysis validity of factors in a pilot test. Then, collecting data from the questionnaires and computing the factors loading by Smart-PLS. Finally, summarizing the survey results, discussion, conclusions, limitations, and future research—the structure is shown in **Figure 1.1.**

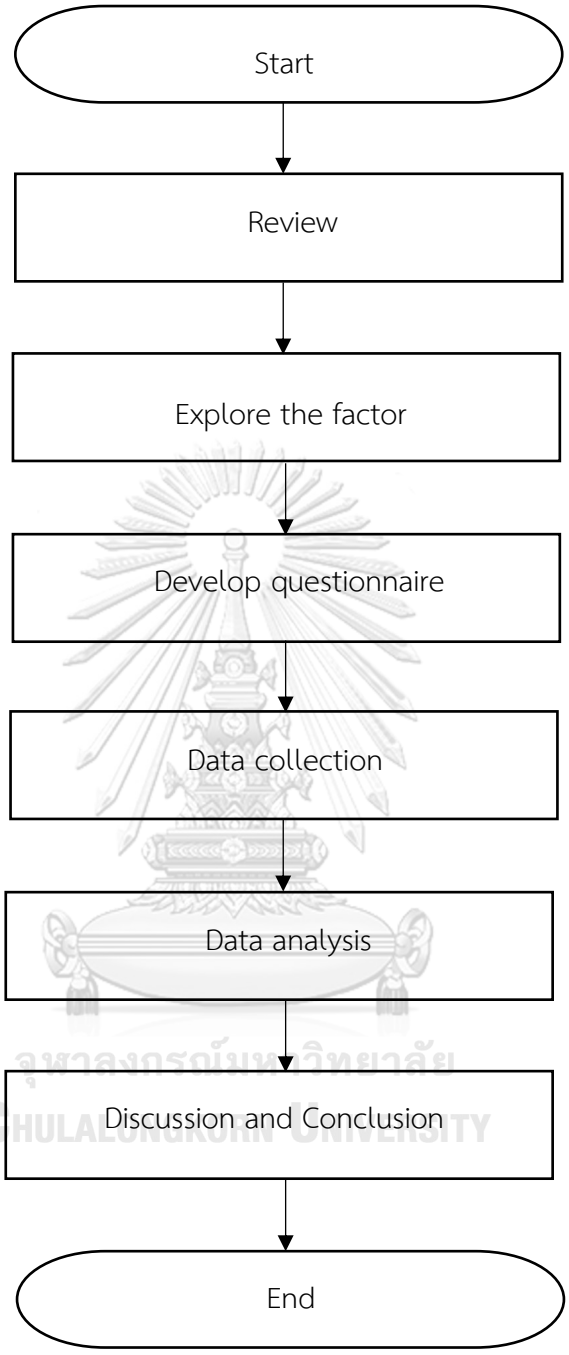

Figure 1.1 Research structure

Chapter 2Literature Review and Model Development

This chapter presents the literature review and summarizes the factors studied by the Theory of Planned Behavior. Moreover, the concerns used to develop hypotheses, the model development, and the research plan to determine willingness to purchase (WTP) levels along with identifying factors of WTP, which is the maximum amount an individual consumer will spend on a product, are described. The magnitude of WTP could provide valuable information and results which could be used to identify the marketing strategies for organic products in the future (Chen, 2015).

2.1 Overview of organic milk and organic food industry researches in Thailand

The study was conducted to investigate the willingness to pay the price premium for a green product of 1,200 responses from the Generation Y sampled in Chiang Mai. The result showed that education level, income, gender, familiarity with green products, confidence in green product certifications, perception of green product quality, and degree of environmental concern significantly affected the willingness to pay price premium for green commodities (Leerattanakorn N., 2017).

Based on the research conducted by Pomsanam, Napompech, and Suwanmaneepong which focused on the factors for consumers' intention to purchase organid food, the survey was distributed to collect 400 samples in Sa Kaeo Province and was analyzed by multiple linear regression (MLR) to find out the possible factors. Subjective norms, environmental safety, trust in the label, food quality, availability, and convenience stores are significant issues in buying organic food (Pomsanam, Napompech, & Suwanmaneepong, 2014).

The study of willingness for organic product purchasing in Thailand found that the factors of education and age affected the purchasing decision of consumers. The selected organic products in this study were organic Chinese kale, jasmine rice, and pork. The questionnaire survey results showed that consumers were willing to choose organic products provided that they have a good health and strong ethical and environmental awareness. Moreover, consumers also inclined to purchase organic products on the condition that the products delivered better quality and benefits to

health and that they were sold at the supermarket in town." Anyway the high price decreased WTP (Sriwaranun, Gan, Lee, & Cohen, 2015).

The study of the willingness to pay for organic products by Pracharuengwit and Chiaravutthi was analyzed through the purchase of jasmine rice, carrots, and eggs by 72 Thai representative consumers recruited by Mahidol University, Thailand. The outcome revealed the label with organic certification has on impact on the organic food price premium. The author recommended that the public should be informed of the facts and the benefits of organic certification (Pracharuengwit & Chiaravutthi, 2015).

A consumer survey of willingness to purchase organic fresh milk was done on 400 customers to study the variables influencing the attitude toward organic foods in Bangkok, Thailand. The method was to evaluate data using multiple regressions. The attitude toward the commodity positively affects health awareness, environmental concern, food safety, and subjective norms. And, health consciousness has a positive effect on lifestyle wellness. The author suggestion was to promote environmentally friendly practice and chemical-free foods which could help grow Thailand's food market (Chareonpanich & Vongurai, 2018).

Studies into the consumers' preference and willingness to purchase organic milk were conducted by using questionnaire survey with 400 samples from Bangkok. The conjoint analysis data and the results demonstrated that the consumers would spend THB 7.50 more for a glass bottle of organic milk and THB 16.25 (200 c.c.) for organic certified seal milk products. Also, packaging, certified with organic product seal, and price per unit are the reasons contributing to the purchase. But, the place of sale is not significant for buying decisions (Aubhalee, Lhimsomboonchai, & Darunphet, 2018)

The research on purchasing of organic milk in Thailand is narrow in terms of studied products and areas. Therefore, this thesis aims to identify and study factors affecting the customer's willingness to purchase organic fresh milk in Thailand.

2.2 Theory of Planned Behavior (TPB)

The study of organic products in the past created the studied customers who were willing to pay for organic food. The Theory of Planned Behavior (Ajzen, 1991) invented

the Theory of Reasoned Action (TRA) and developed it into the TPB theory (Conner, 2020). According to this theory, human behavior is the result of three different beliefs : behavioral (beliefs about the likely consequences of behavior), normative (beliefs about expectations of others), and control (beliefs about the factors that may facilitate or impede the adoption of the behavior) (de Graaf et al., 2016). Three factors include attitude to behavior (AB), subjective norm influence (SN), and perceived behavior control (PBC) which influence the intention toward behaviors (Yanakittkul & Aungvaravong, 2019).

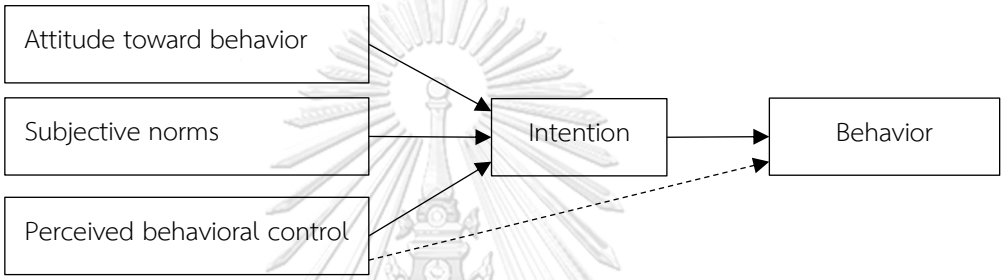

Figure 2.1 The Model Theory of Planned Behavior (TPB)

Note. Adopted: "Attitudes and Behavior." by Manstead, A.S.R. (2001). International Encyclopedia of the Social & Behavioral, p. 912.

Attitude toward behavior is the expression of the person in the positive and negative ways. Attitude can have a significant influence on the prediction of Intention (Zhang., 2018). For example, positive attitudes toward organic yogurt could increase the organic yogurt consumption as well as increase the consumer's attitude toward and knowledge about consumption of organic yogurt (Van Loo, Diem, Pieniak, & Verbeke, 2013).

The WTP decision of the reference group complied with the subjective norm which was the perceived expectation of others such as family, lovers, close friend. (Dubinsky & Loken, 1989). However, the subjective norm slightly affected the practice (Zhang., 2018). Therefore, families and friends would influence the decision of organic product choosing (Zagata, 2012). However, some research found that the subjective norm did not affect the willingness to pay (Yadav & Pathak, 2016).

Perceived Behavioral Control was designed to represent both internal and external variables in people's minds. Ajzen and Madden (1986) defined PBC as follows: Perceived behavioral control is a person's belief about how easy or difficult performance of the behavior is likely to be (Kraft, Rise, Sutton, & Røysamb, 2005). Perceived behavioral control depends on three factors; capabilities, resources, and opportunities. A lack of awareness makes it difficult to implement a particular act (Zhang., 2018). PBC in a variety of ways, including perceived inconvenience, time involved, and resources. Moreover, Camilla and Patrick found that the perceived inconvenience is regularly related to the lack of intentions to purchase environmentally friendly products (L. Zhang, Fan, Zhang, & Zhang, 2019).

Theory of Planned Behavior is an appropriate tool used in a study about willingness to purchase rather than to study on impediments such as prices (Yazdanpanah, Forouzani, Abdeshahi, & Jafari, 2016). In TPB, there are three types of beliefs; behavior beliefs, normative beliefs, and control beliefs, indirectly affecting attitude toward behavior, subjective norms, and perceived behavior control, respectively (Conner, 2020). The theory is considerably applicable for examining specific behaviors at certain times, such as health, marketing, management, etc. (Zhang., 2018). It is also applied to research a variety of research focusing on organic products (Scalco, Noventa, Sartori, & Ceschi, 2017) because the theory is based on a study of consumer behavior (Shamsi, Najafabadi, & Hosseini, 2020). Thus, three factors are determinants of choosing organic menu items (Shin, Im, Jung, & Severt, 2017).

2.3 Factors affecting or influencing willingness to purchase (WTP)

The concepts of organic milk consumers were searched by using keywords "willingness to pay" and "organic" and "milk" in database collections between 2009 to 2019. The criteria applied to this study is selecting ten papers and journals from the Science Direct and Google Scholar. The other organic drinks, organic coffee beans, with the WTP keyword were also used in this research. Summary of these works of literature related to their authors, methodology and factors affecting the WTP organic milk are displayed in **Table 2.1.**

Table 2.1 Summary of literature review on WTP toward organic milk

No.	Authors	Methodology	Factor effect to WTP
1.	Li, Sijtsema, Kornelis, Liu, & Li (2019)	-Econometric models - Pilot survey 30 samples - Questionnaire Survey - Least-squares regression approach	High price, quality certification, high quality, traceability and origin
2.	Charlebois & Haratifar. (2015)	- Review paper - A paper-and-pencil structured survey	Label, information provide sale, health
3.	Graaf et al. (2016)	- Attitude toward purchase - Theory explaining human behavior - Linear regression model - Using SPSS	High perceived, Attitude, person who understand animal welfare
4.	Wier, Jensen, Andersen, & Millock (2008)	- Survey data by questionnaire - Regression analysis - Labelling schemes function well for selling Factor WTP call Private good	Freshness, Testy, Health benefit, Attributes (environment and animal welfare) acknowledge but less influence WTP
5.	Amirnejad& Tonakbar. (2018)	- Using Contingent Valuation Method (CVM) - Single Bounded Dichotomous Choice questionnaire	Personal information, knowledge about organic milk, respondent's attitude, respondent's willingness to pay

Table 2.1 Summary of literature review on WTP toward organic milk. (Continued)

No.	Authors	Methodology	Factor effect to WTP
6.	Huang & Lee (2014)	- Contingent valuation method (CVM)	Fresh Milk Logo, price/promotion, product/brand.
7.	Smed (2005)	- Almost Ideal Demand (AID)	Households inevitably not significant
8.	Schott & Bernard (2015)	- Tobit models - Socio-demographics - Variables from the TPB	Farm size, non-certified organic
9.	Yue, Arbiol, Nomura, & Yabe (2015)	- Random parameters logit (RPL) model	Organic feeding, animal welfare, chemical-concerns, certification, price, Socio-demographics e.g. age, highly-educated and male consumers
10.	Gulseven (2018)	- Face-to-face survey - Regression	Price, Packaging, brand image (by tabular analysis), educational (by the stepwise regression)
11.	Chun-Chu Liu (2018)	survey 650 questionnaires	1.Traceability, organic, graded, environmentally friendly, fair-trade certifications

The research of Smed showed the outcome that households inevitably increased sales by using the nearly ideal demand (AID) to analyze the results (Smed, 2005).

The study of Weir et al. in European countries, Great Britain, and Denmark analyzed the organic food market using a questionnaire survey. The four variables: freshness, research, health benefits, and characteristics (environment and animal welfare) influenced WTP. WTP considerations apply to personal goods (Wier et al., 2008).

The research of Huang and Lee in 2014 elicited willingness to pay of Taiwanese customers and consumer perceptions and preference of organic Certified Agricultural Standards (CAS). The authors concluded that the significant factors affecting WTP are "Fresh Milk Logo" and "organic" by Contingent Valuation Method (CVM) (Huang & Lee, 2014).

Scott and Bernard (2015) studied consumers' willingness to pay concerning with size and non-certified organic goods as a replacement for quality certification after using the Tobit model. This study is related to social demographics and variability from TPB (Schott & Bernard, 2015).

(Yue, Arbiol, Nomura, & Yabe, 2015) The outcome of the research using the Random Parameters Logit (RPL) model found that Organic feeding, animal welfare, chemical concern, certification, price usually indicates that consumers are WTP for a quality product under these factors. Moreover, socio-demographic such as age, high education, and male buyers affect WTP.

(Charlebois & Haratifar, 2015) They reviewed the paper, studying the perceived value of dairy products' food traceability in the young consumer. Food traceability systems would help consumer confidence in food safety and quality. The questionnaire had a survey on 75 undergraduate students of the University of Guelph. The study showed label information is significant in purchasing milk and dairy.

(de Graaf et al., 2016) hey introduced the Theory explaining human behavior concern about welfare products -the study by survey 787 Flemish customers. Earth of the investigation is an attitude toward and intention welfare milk by using a linear

regression model. An example of a result is the high perceived local origin, animal welfare, living cows, and a positive attitude.

(Amirnejad & Tonakbar, 2018) used the contingent valuation method (CVM) and single Bounded Dichotomous choice questionnaire. Overall customer, 80.3% of the respondents were willing to pay for organic milk. However, using the Logit regression model to evaluate the effect of explanatory variables. The result is that personal information, knowledge about organic milk, respondent's attitude, and respondent's willingness to pay are significant factors in Tehran.

(Gulseven, 2018) The author using face to face survey to study consumers' decision to purchase organic milk in Turkish. Stepwise regression is one method to analysis and also found that education is an only significant indicator. Moreover, customers expressed increased interest in the product's price, package, brand image, and education.

(Chun-Chu Liu, 2018) survey 650 questionnaires for study consumers ' purchased coffee beans in Taiwan. The results indicate that the respondents' WTP attributes ranked from traceability, organic, graded, environmentally friendly, and fair-trade certifications.

(Li, Sijtsema, Kornelis, Liu, & Li, 2019) The study used principal component analysis (PCA) to measure Chinese consumer confidence in milk after finding melamine-contamination in 2008 and validating it by Confirmatory Factor Analysis (CFA). It investigated a pilot survey of 30 samples, a questionnaire survey of 450 consumers in Beijing, Tianjin, and Shijiazhuang. Least-squares regression approach factor score of optimism and pessimism. The authors reported consumers less confidence in domestically-produced infant formula. However, the certification of raw milk and traceability is significantly by consumer confidence. Moreover, the positive impact of pessimists is of high quality and price.

TPB's relationship with WTP is contradictory. We found that most of them used a questionnaire survey sample of the customer. They used the TPB, an attitude toward behavior, subjective norm, and perceived behavioral control, to identify the purchase

factor, for example, more models, random parameters logit model, which is an econometric model to calculate the price of the product. The hypotheses are following using regression, contingent valuation method, tabular analysis, and SPSS. Factors that affected WTP are price, packaging, certification, animal welfare, organic feeding, information, freshness, testy, health benefit, environment, and socio-demographics such as age, educated, and sex. From the literature review, the concern willingness to purchase the study would group according to TPB's factor, and results show in **Table 2.2.**

Table 2.2 The study grouping by Theory of Planned Behavior

Attitude towards behavioral	Subjective norms	Perceived behavior control
Information	Social media	Price
Animal welfare	Healthy	Information
Social media		
Certification/label		
Traceability and origin		
Brand image		
Farm sizing		
Organic feeding		
Freshness		
Packaging		
Wealth		
Chemical concerns		

The first group is an attitude towards behavior, which contains information, animal welfare, social media, pandemic, quality certification/ label, traceability and origin, brand image, farm size, organic feeding, freshness, packaging, wealth, and chemical concerns. The second group is subjective Norms, which are social media and health. The last group is perceived behavior control, which is the summation of price and information. Although these three groups are essential, attitudes toward organic fresh

milk and subjective norms are vital determinants of intention to perform a performance (McClure & Seock, 2020) however, the individual consumer does not choose under commodities prices (Smed, 2005). So, we selected a study factor in this group of effects on the willingness to purchase organic milk.

H1; Attitude towards behavior increases willingness to purchase organic fresh milk.

H2; Subjective norms increase willingness to purchase organic fresh milk.

H3; Perceived behavioral control increases willingness to purchase organic fresh milk.

2.3.1 Factors from the seller perspective

After that, we have chosen some factors separated by a factor from the customer's perspective and factor. First, I would like to show an element from the seller's perspective;

Information: The CLYMBOL project also explains that labeling functional food products are of utmost importance because it helps consumers recognize specific health benefits. The purchasing decisions can be affected by advertising, health awareness, and customer attitudes towards functional food items (Díaz, Fernández-Ruiz, & Cámara, 2020). The label researchers need to enhance comprehensive, time-sensitive health policy (Payán & Lewis, 2019). For example, the Aquaculture Stewardship Council (ASC) eco-label and the use of references on nutrition. The well-being (such as rich in omega 3) to help consumers make choices. But no research study outlines our understanding of the effects of nutritional and health claims for customer preferences and WTP (willingness to pay) for foods produced (Banovic, Reinders, Claret, Guerrero, & Krystallis, 2019). They understood the picture in their design method for decision-making. Labeling was hard to understand or use as an attribute looking to buy (Hakim, Zanetta, de Oliveira, & da Cunha, 2020). All concern is an effective way to inform that concern about health.

H4; Information provided in the package positively affects attitude towards behavior.

2.3.2 Factors from the customer perspective

I would like to show a factors from the customer perspective are;

Ethic/ Animal welfare: The increasing willingness of consumers to purchase for traceability of food has been given attention to the influence of food safety issues in this area (Zhang, Bai, & Wahl, 2012). Ethics, Animal Welfare, will make consumers kind (de Jonge, van der Lans, & van Trijp, 2015). Ethical motives determine the purchase of organic food, significantly environmental protection, and animal welfare (Fox & Ward, 2008). Implementation of adequate animal welfare has been suggested as an essential option to make modern dairy farming more sustainable (Herzog, Winckler, & Zollitsch, 2018). Customer are accepted animal welfare but has less impact on intention, so we would like to learn about animal welfare rates and assess positive attitude (Wier et al., 2008).

H5; Ethical and animal welfare concerns have a positive effect on attitude towards behavior.

COVID: COVID-19 causes one symptoms in their health. Risk factors seem to be likely to increase in patients, such as family concerns and friends (Vindegaard & Benros, 2020). The situation is serious now because it is widely spread out worldwide quickly. Nationwide freezing has resulted in financial losses, harming all society segments, the chain reaction on accommodation, health care, and nutrition (Gopalan & Misra, 2020). One of several risk mitigation selected to stay at home would have been for people to understand good knowledge and a positive response to COVID-19 (Mansuri, Zalat, Khan, Alsaedi, & Ibrahim, 2020). In the future, the technology called DietHub is an AI-based approach the calculate the nutrient. So in the COVID factor, we may investigate the effect of the COVID-19 on food consumption behaviors (Eftimov, Popovski, Petković, Seljak, & Kocev, 2020).

H6; COVID-19 has a positive effect on attitude toward behavior.

Social media: News always played a complementary role in food safety policy, showing a broader range of occurrences (Zhu, Huang, & Manning, 2019). Supporting that Facebook channel prefers most of the survey group to read health information

around 40% (Ardwichai, Khetta, & Ontama, 2019). Our findings indicate a definite correlation between the integrated acculturation strategy and information sharing in social media, influencing the acculturation of healthy eating habits among users (Choudhary, Nayak, Kumari, & Choudhury, 2019). Some women use video technology to develop cooking skills that foster motivation and morality and develop cooking abilities (Surgenor et al., 2017). The media contributed to the study's presentation does not affect women's body attitude or perception of food; they may be more easily influence by unhealthy foods and would be more likely to buy unhealthy foods (Rodgers, Kruger, Lowy, Long, & Richard, 2019). Moderated by social distance, close friends are less impacted by media content than strangers (Pham, Shancer, & Nelson, 2019). Social media can use easy access to get the information but sometimes found that adverse effects. For example (Zhen, HUANG, Yu, & ZHOU, 2019) found that the ripple effect extended to the impact of risk events with negative traceability producers or social networks that customers need to obtain.

H7; Social media has a positive effect on subjective norms.

Healthy and life style: The health trend makes consumers interested in organic milk, focusing on quality and safe products (kasikorn research, 2018). Organic milk has nutritional such as Conjugated Linoleic Acids (CLA), founded in milk-fed only from cow grazing. CLA helps to reduce the risk of heart disease. (Dilzer & Park, 2012). Inhibits the spread of cancer, and Omega 3 and Omega 6 are fatty acids that help reduces blood triglyceride levels (Candela et al., 2011). European Food Safety Authority (EFSA) reported the sampling survey food in the EU that found pesticide residues in organic food were below the Maximum Residue Limit (MRL) level of 13.8% (46.0 % in common food). Also, they found residues exceeded the MRL 1.4% (4.8 %n common foods) level in 2018. So, organic food is better for health than non-organic food (GREENNET, 2019). A consumer would buy the organic product that mentions the benefits for health prefer. Value-added nutrition and health benefit could encourage the purchase of a product. So this result from help reference benefits consumers willing organic products (Aschemann-Witzel, Maroscheck, & Hamm, 2013). There are no significant differences

between organic foods and their conventional counterparts regarding the safety or nutritional content (Akaichi, Nayga, & Gil, 2012).

H8; Healthy and lifestyles have a positive effect on attitude towards behavior.

Price: The study of the price estimated of organic milk in Thailand resulted from the study's willingness to purchase organic milk in Mueang district, Chiang Mai. The tools were the Contingent Valuation Method (CVM) and double-bound questions by 400 consumers. The result showed that the product, price, packaging, market, and information affected purchasing willingness. In other, the customers agreed to pay an increase of THB 3.87 - 4.17 per 400 cubic centimeters (Sangangamvong, 2013). Besides study willingness of consumers to purchase organic milk—Survey data from 400 samples in Bangkok, Thailand. The result analyzed by conjoint analysis shows package, certification, and price significant to WTP. Moreover, they are willing to pay for the certificate of organic milk, THB 16.25 and THB 7.5 of glass-bottled per 200 cubic centimeters (Aubhalee et al., 2018). So, high prices of organic products are often a hindrance to purchasing (Hossain & Lim, 2016).

H9; High price effect to perceived behavior control of willingness to purchase organic fresh milk.

All mentioned hypotheses summarize in proposed research model in **Figure 2.2**

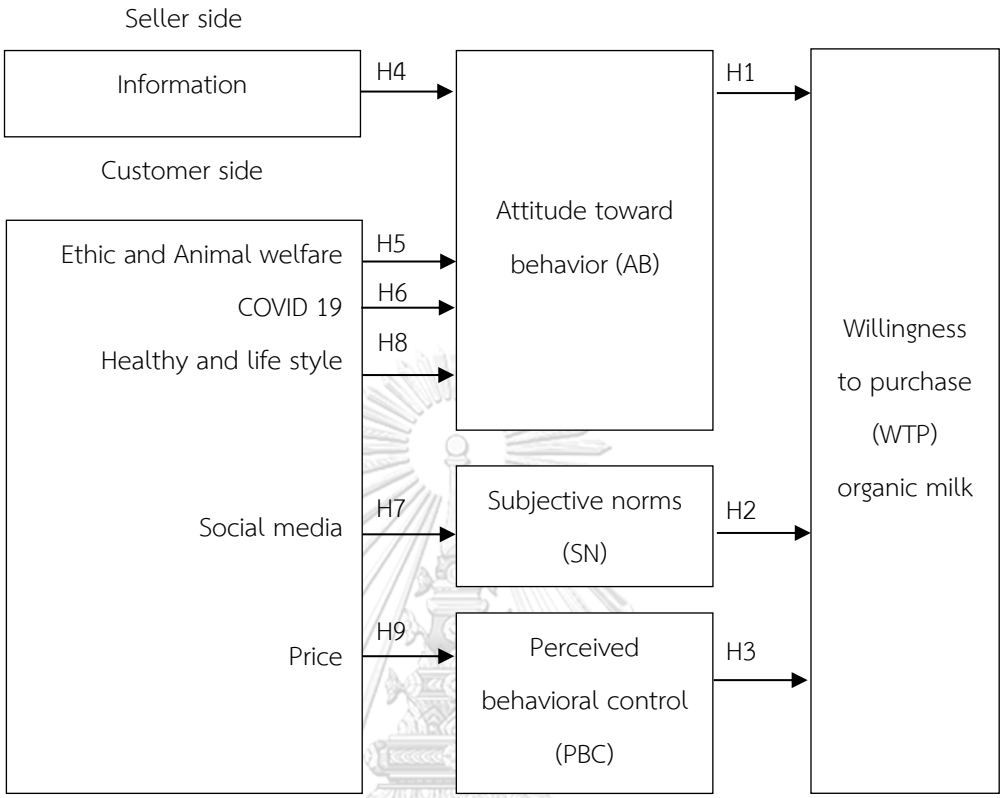

Figure 2.2 Proposed research model

Chapter 3 Methodology

The details of chapter 3 presents the questionnaire development, data collection, and data analysis. This study conducts an analysis of factors to provide the hypotheses tested using the Partial Least Squares-based Structural Equation Modeling (PLS-SEM) technique (Chekima, Chekima, & Chekima, 2019).

3.1 Questionnaire Development

The questionnaires were constructed with two languages, Thai and English. It was initiated in English and later translated to Thai. In addition, the questionnaires were prepared in Google form. It is separated into four sections: an introduction, demographic profile, general information, and suggestion section. The demographic section is open-ended, consisting of screen consumers who are organic enthusiasts, age, gender, average annual income (MARKETING OOPS!, 2015), educational level, household location (Office of the Permanent Secretary for Ministry of Agriculture and Cooperatives, 2017), and family members. The general pieces of information consist of 9 factors starting with the question regarding the information attached on the product which might increase the Attitude. For example, 'I check the certification before purchasing the products', 'I compare information labels to decide which brand to purchase', etc. (Pungchoo, Kanthawongs, & Chitcharoen, 2014; Voon, Ngui, & Agrawal, 2011). The question of ethics and animal welfare aims to find out a person's attitude; for example, 'I consider whether what I used/eat would damage/hurt animals or not', etc. The question of COVID-19 would be to study the effect on Attitude of purchase product such as 'COVID-19 improves my willingness to purchase good food', or 'COVID-19 makes me what to pay more for good food'. The question of social media could survey the effect on subjective norms; for instance, 'I see my friend shared about health info on the social network' or 'I'm interested in health-related info on social media'. The question of health and lifestyle aims to study the effect on behavior intention such as 'I tend to follow a healthy lifestyle' or 'I purchase a health insurance'. (Sriwaranun et al., 2015). The question of attitude toward behavior and subjective norm following that I believe that organic milk is free with genetic

modification and my friends suggest me to favor organic milk / organic food. Moreover, the questions on the willingness to purchase are read as, for example, I'm willing to purchase organic milk, I am willing to purchase organic milk regularly if there are limited choices (Sriwaranun et al., 2015; Voon et al., 2011). The last section encourages the respondents to provide suggestions or comments regarding the survey. Respondents were asked to indicate their agreement with each argument for each variable relevant to these measures using a seven-point Likert scale ranging from '1 = strongly disagree' to '7 = strongly agree'.

3.2. Pilot test

The pilot test performed pre-testing to adjust the questionnaire before administering the survey to strengthen its internal validity. Because this gauges the reaction before a full-fledged investigation, a small-scale study of respondents was used in the pilot study (Jhantasana, 2019). The sample size that typical marketing research suggests, the factor 10 latent variables can require a minimum sample size of 91 (Wong, 2013). The data used the PLS graph to determine the reliability, validity, and measurement precision. Validity defines as the precision with a concept reflects the outcome of the measurement. Content validity, convergent validity, and discriminant validity are some of the characteristics metrics used to do this. Also, cross-loading suggested a score less than 1.0 shown in **Table 3.1** (Jhantasana, 2019). We used the Smart PLS 3.3.3 version in this investigation. Moreover study of exploratory factor analysis (EFA) looks at the inter-correlations between groups of items to break them down into smaller groupings. EFA is being used to test the instrument's validity (Memon, Ting, Ramayah, Chuah, & Hwa, 2017).

The relationship of factors uses cross-loading to confirm a result from programming. All the development is present in Table 3.1. It shows that elements do not overlap. So, cross-loading use to verify that the two factors are separate. The criteria are the items belonging to each aspect must have high value than different factors.

Table 3.1 Cross loading in the pilot test

Factor	AB	COVID	E&W	HE	INFO	PCB	PR	SM	SN	WTP
AB_1	**0.821**	0.645	0.761	0.402	0.627	0.292	0.042	0.626	0.702	0.614
AB_3	**0.865**	0.581	0.692	0.457	0.729	0.230	0.061	0.536	0.637	0.751
AB_4	**0.889**	0.702	0.805	0.525	0.764	0.183	0.063	0.667	0.773	0.834
AB_5	**0.888**	0.648	0.704	0.524	0.723	0.130	0.042	0.569	0.674	0.771
COVID_1	0.482	**0.749**	0.570	0.602	0.472	0.185	-0.053	0.573	0.492	0.429
COVID_2	0.594	**0.849**	0.551	0.605	0.483	0.157	0.025	0.578	0.618	0.557
COVID_3	0.680	**0.865**	0.663	0.528	0.603	0.238	0.042	0.654	0.709	0.604
COVID_4	0.621	**0.757**	0.705	0.472	0.564	0.298	0.048	0.683	0.604	0.621
E&W_1	0.620	0.605	**0.806**	0.396	0.546	0.216	0.145	0.707	0.595	0.516
E&W_3	0.505	0.480	**0.668**	0.277	0.521	0.224	0.240	0.476	0.472	0.460
E&W_4	0.672	0.728	**0.746**	0.456	0.490	0.312	0.096	0.623	0.640	0.493
E&W_6	0.744	0.634	**0.830**	0.434	0.714	0.294	0.080	0.649	0.609	0.752
E&W_7	0.726	0.544	**0.783**	0.442	0.693	0.162	-0.006	0.562	0.581	0.615
E&W_8	0.694	0.618	**0.833**	0.459	0.640	0.228	0.010	0.690	0.705	0.639
HE_1	0.430	0.499	0.333	**0.777**	0.372	0.199	0.066	0.360	0.524	0.398
HE_2	0.509	0.649	0.517	**0.882**	0.468	0.149	0.050	0.445	0.479	0.424
HE_3	0.388	0.470	0.430	**0.754**	0.317	0.209	0.104	0.348	0.318	0.326
INFO_10	0.639	0.435	0.628	0.359	**0.674**	0.202	-0.079	0.418	0.530	0.553
INFO_11	0.670	0.568	0.643	0.395	**0.806**	0.154	0.063	0.589	0.586	0.614
INFO_6	0.711	0.612	0.556	0.446	**0.850**	0.132	0.024	0.610	0.727	0.704
INFO_7	0.742	0.590	0.675	0.416	**0.921**	0.091	0.082	0.651	0.712	0.732
INFO_8	0.659	0.603	0.728	0.473	**0.834**	0.187	0.006	0.666	0.675	0.591
INFO_9	0.633	0.448	0.610	0.297	**0.840**	0.087	0.128	0.592	0.647	0.551
PBC_1	0.190	0.212	0.275	0.169	0.139	**0.711**	0.260	0.209	0.176	0.179
PBC_2	0.342	0.316	0.386	0.288	0.252	**0.830**	0.323	0.286	0.391	0.284
PBC_3	0.054	0.135	0.097	0.089	0.033	**0.790**	0.511	0.197	0.117	0.055
PR_1	0.128	0.139	0.225	0.125	0.145	0.471	**0.897**	0.197	0.151	0.078
PR_2	-0.051	-0.137	-0.083	0.008	-0.102	0.351	**0.806**	-0.080	-0.097	-0.144
SM_1	0.512	0.644	0.685	0.437	0.609	0.287	0.041	**0.827**	0.627	0.453
SM_2	0.649	0.692	0.680	0.382	0.621	0.208	0.056	**0.809**	0.717	0.515
SM_3	0.510	0.581	0.587	0.307	0.503	0.333	0.130	**0.853**	0.640	0.479
SM_4	0.623	0.650	0.692	0.472	0.646	0.156	0.080	**0.840**	0.654	0.512
SN_1	0.657	0.677	0.634	0.529	0.700	0.217	-0.015	0.661	**0.882**	0.621
SN_2	0.656	0.602	0.634	0.419	0.618	0.297	0.108	0.677	**0.885**	0.617
SN_3	0.776	0.696	0.741	0.485	0.728	0.234	0.044	0.728	**0.838**	0.682

Table 3.1 Cross loading in the pilot test. (Continued)

Factor	AB	COVID	E&W	HE	INFO	PCB	PR	SM	SN	WTP
WTP_1	0.785	0.620	0.700	0.407	0.683	0.148	-0.057	0.545	0.665	**0.917**
WTP_2	0.751	0.631	0.626	0.423	0.654	0.194	-0.056	0.517	0.623	**0.856**
WTP_4	0.777	0.611	0.691	0.452	0.708	0.221	0.056	0.523	0.695	**0.911**

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Another validity test used Cronbach's Alpha and average variance extracted (AVE) to determine whether items consistently measure the same latent variable. Cronbach's Alpha could be higher than the recommended 0.7 standards. The AVE values for convergent validity were higher than the suggested 0.5 value (Jhantasana, 2019). All results are present in Table 3.2, and values are good.

Table 3.2 Cronbach's alpha and AVE in the pilot test

Constructs	Cronbach's alpha	AVE
Attitude toward behavior	0.889	0.750
COVID-19	0.821	0.651
Ethic and Animal welfare	0.870	0.608
Healthy and life style	0.729	0.650
Information	0.903	0.679
Perceived behavioral control	0.683	0.606
Price	0.631	0.727
Social media	0.852	0.693
Subjective Norm	0.837	0.755
Willingness to purchase	0.875	0.801

This meaning the factor does not deal with another factor. The Cronbach's alpha, such as attitude toward behavior and COVID-19, have over spec from 0.7 and some aspects less than value. The result of AVE is more than 0.5 for all factors. Finally, this study has the value pass of validity and reliability functional test. Moreover, the complete pilot copies of the questionnaire were randomly distributing, developing into refined questionnaires. After that, the new revision appropriately revised the range of prices based on respondents' answers.

3.3. Data collection

The sample numbers are the premises that divide data into various provinces in Thailand, consisting of Bangkok, Khon Kaen, Chonburi, Chiang Mai, Nakhon Ratchasima, and Phuket. The sample selection is a non - randomized sampling of men and women equal to 30% of all samples—using Yamane's formula, the number of sample consumers (Ngoc & Buavaraporn, 2019).

$$n = \frac{N}{1+Ne^2} \qquad (1)$$

Where

n = the sample size

N = the population size

e = Margin of error (MoE)

Error = 5% based on the research condition

We used the table's principle at the 95% confidence level, the Z = 1.96 with expected movement + -5% into the sampling size are shown in Equation (1). Since Thailand's population is approximately 69,000,000 persons (The World Bank, 2020). In case of sampling at a population of more than 100,000 persons. The result of this sample are 400 persons should be required (Yamane, 1973).

This study focuses on survey consumers in Thailand, particularly Bangkok, Khon Kaen, Chonburi, Chiang Mai, Nakhon Ratchasima, and Phuket. The target sample size to be 400 during the online questionnaire survey in December 2020. The study was scoping by age between 20 – 60 years old because of limit these samples since 1) they are not major clusters of decision-makers of buying the milk and 2) ethical concerns. (Takuya, Takumi, & Miki, 2019). Four hundred participants from the living area target key persons responsible for buying organic milk total sample size.

3.4. Data analysis

3.4.1 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) is a statistical technique that combines confirmatory factor analysis (CFA) and path analysis. It was first developed by Joreskog (1973); SEM estimates the coefficients and residual variances. Therefore, it is also

helpful to measure a hypothetical variance-covariance matrix (Chen, 2015) and partial Least Square-Structural Equation Modelling with PLS plus 3.0 program (Yuliantoro, Goeltom, Juliana, Pramono, & Purwanto, 2019). Structural equation modeling identifies a strong interdependence between the natural and the enriched attributes, suggesting they are complementary rather than substitutes in consumers' food choices (Caracciolo et al., 2019). Structural equations model reveals the positive association between knowledge, attitudes, and purchasing frequency (Van Loo et al., 2013).

3.4.2 Partial Least Square-Structural Equation Modelling (PLS-SEM)

PLS-SEM is a causal-predictive approach to SEM that is in the statistical estimating model. PLS-SEM's strong asset is to test a theoretical framework that is good for a complex structural model and includes many structures; indicative and model relationships, learning path model, limits the sample, and requires latent variable research (Hair, Risher, Sarstedt, & Ringle, 2018). Variance-based SEM approaches include generalized standardized component analysis of typical partial least squares (PLS), path modeling, and regularized generalized canonical correlation analysis of extended canonical correlation analysis (Henseler, 2017). PLS-SEM is very appealing to various kinds of research to estimate complex cause-effect relationship models (Cepeda-Carrion, Cegarra-Navarro, & Cillo, 2019). PLS-SEM is a causal-predictive approach to SEM that is in the statistical estimating model. PLS-SEM's good point is to test an excellent theoretical framework for a complex structural model. It includes many structures, indicative and model relationships, and a learning path model, limiting the sample and requiring latent variable research (Hair et al., 2018). In the study, the sample group adequate for the use of multilateral diagnostic statistics was effectively at least 5-10 scorecard quantities, with 54 respondents, according to the Hair et al. (2018) formula. PLS-SEM can handle small samples between 100-200 samples. Hence, we used 400 samples—less than the maximum number of steps listed. For example, the study examines the variables that affect the adolescent's intention. Twelve elements of the constructed proposes are the model hypotheses of this study. In the Pakistani context, people are buying organic food. For the study's purpose, the author used the results of PLS-SEM data gathered from 350 respondents and analyzed the model by PLS-SEM

(Raza, Shah, & Nisar, 2019). Another sample researched 222 samples on the effect of health literacy, organic food knowledge, and environmental issues on Hong Kong consumers' attitudes toward organic foods conducted using the PLS-SEM process (Cheung, Lau, & Lam, 2015).

Chapter 4 Analysis Result

The details of chapter 4 present the descriptive demographic result of SmartPLS, such as outer loading, T-statistic, P-value. This study analyzes the willingness to purchase comparison between consumers living in Bangkok and other provinces.

4.1 Descriptive result

The results of one thousand sixty-one survey respondents were collected 8 - 10 March 2021 base on the Thai version (see in Appendix B) by Macronmill, inc. Likewise, the organic fresh milk experience is a question of the non-random sampling are 1,061 samples. Therefore, the first screen selected only people who answered “yes” in S2Q1 (see in appendix A), “drink milk,” and in S2Q2 (see in appendix A), answer choices 1 and 2 were based on 722 samples, as shown in **Figure 4.1.**

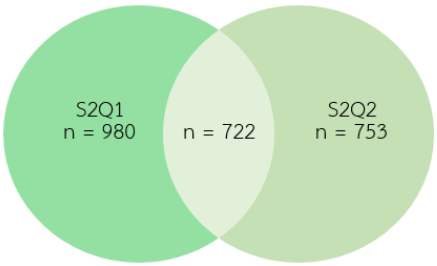

Figure 4.1 Number of responsors who drunk organic milk before

Next, we decided the primary survey focused on 50% of house locations in Bangkok and 50% other provinces. Moreover, the study would focus on 46% the subjects having ever drunk organic milk and 54% of the subjects having never drunk organic milk. Then, the first screening survey is to guarantee we have enough samples to compare the detailed survey. Then, after the first screening survey result, we re-screened with the demography condition. The result showed 422 samples for the second screen. We also tended to achieve maximum randomness under our experiment design. Before using the data in the programming, which is error typing, the comment had deleted four samples. Finally, the primary survey has 418 samples to analyze factors and hypotheses, as shown in **Figure 4.2.**

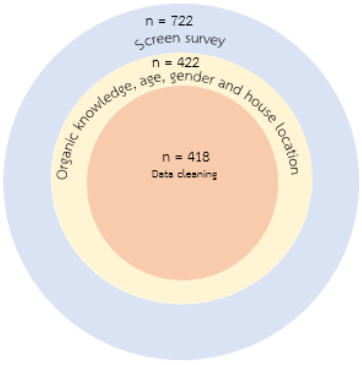

Figure 4.2 Sample selection and cleaning in the second survey

The demography of consumers are female around 49.5% (n=207) and male 50.5% (n=211). Moreover, the age distribution to separated seven groups with less than equal to 19 years, ten years period between 20 - 69, and greater than equal 70 years. Most consumers aged 30 - 39 years is 29.2%, the group of 40 - 49 years are 26.8%, and the age of 20 - 29 years is 24.2%. For education level, over 60% are Bachelor's degree. Few participants graduated less than high school or some above Bachelor's degree. Also, the group of annual salary between THB 300,001 – 1,000,000 is 58.8% and not over THB 300,000 is 32.2% and few rate over THB 1,000,000 is 7.9%. Furthermore, almost 55.5% of consumers have 3 - 4 family members, and the frequency of purchasing is more than 82.9%—the descriptive demographic shown in **Table 4.1**.

Table 4.1 Descriptive demographic

Variables	Frequency	Percentage %
Gender		
Male	211	50.5
Female	207	49.5
Age (year)		
20-29	101	24.2
30-39	122	29.2
40-49	112	26.8
50-49	70	16.7
60-69	13	3.1

Table 4.1 Descriptive demographic (Continued)

Variables	Frequency	Percentage %
Education		
Under high school	17	4.1
High school	57	13.6
Vocational / Diploma	55	13.1
Bachelor Degree	262	62.7
Master Degree/	27	6.5
Doctoral Degree		
Family annual income		
THB 0 – 300,000	139	33.3
THB 300,001–1,000,000	246	58.8
Above THB 1,000,000	33	7.9
Family members		
1 member	17	4.1
2 members	52	12.4
3 or 4 members	232	55.5
5 members or above	117	28.0

In addition, the survey classified by the famous province of the region was Khon Kaen, Chonburi, Chiang Mai, Nakhon Ratchasima, Phuket, and Bangkok Metropolitan Administration. The result showed that most customers are in Bangkok (56%), where as in Khon Kaen (7%), Chonburi (12%), Chiang Mai (12%), Nakhon Ratchasima (8%), and Phuket (5%) the summarize data shown in **Figure 4.3.**

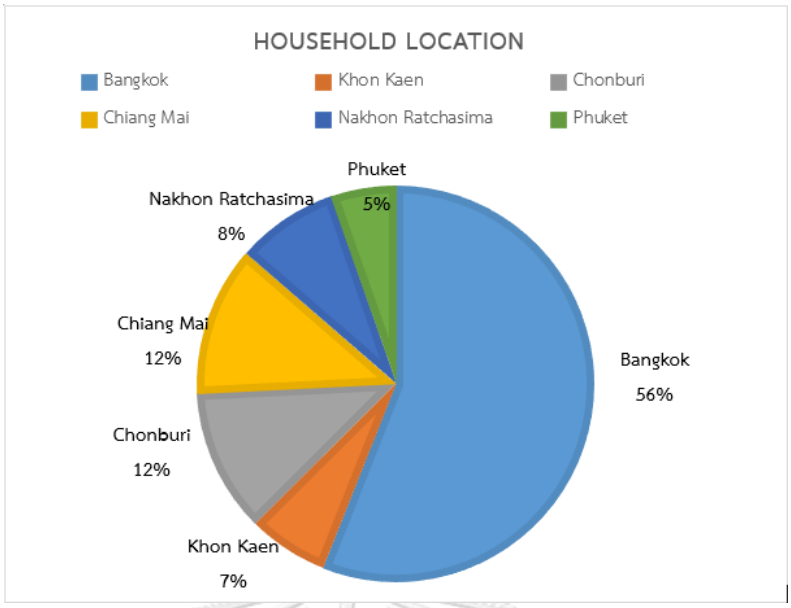

Figure 4.3 Distribution of respondent's household location

Likewise, the organic fresh milk experience is one screen question of the questionnaire survey. The result founded 191 consumers got a knowledgeable background of organic fresh milk and used to drink organic milk before. The popularity of organic milk brands consumed are Dairy home (73.9%), Vinamilk (44.8%), butterfly (34.9%), and Morgan (1.6%) of the total, as shown in **Figure 4.4.**

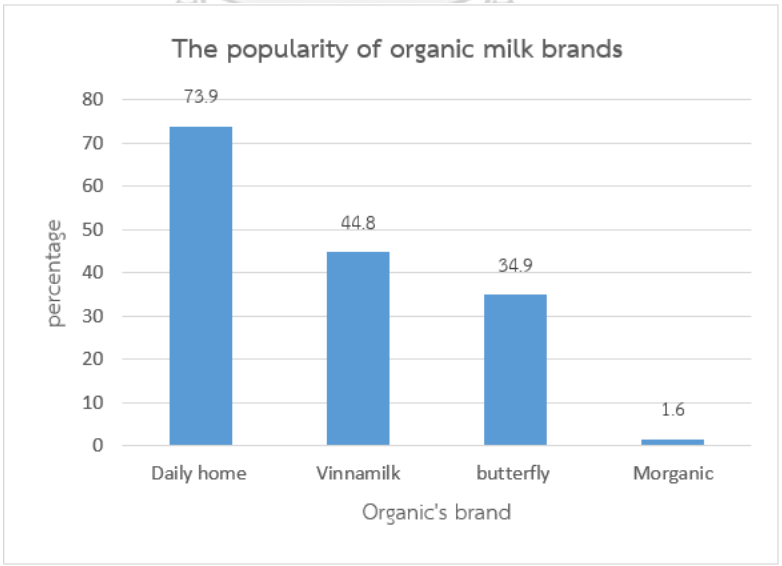

Figure 4.4 Popularity rank of organic milk brands in Thailand

4.2 PLS-SEM

4.2.1 The base model of study

The forty - eight items for assessing qualities and results should belong to the factor running by the program. Factor loading reported results from a model to measure step by step of things. It offers all items that are higher than 0.708. However, some are near the acceptable value which met the expected value. For the initial loading **see in Appendix D.**

First, the value of item E&W_5 of ethics and animal welfare factor is outer loading = 0.401, which minimum score deleted from the model. Thus, the question is, "I believe that genetically modified foods are probably not safe for human consumption." Outer loading after eliminating items is shown in **Appendix E.**

Secondly, we found the items INFO_3 (I concern about additives or artificial flavoring on an organic product label) = 0.447 of Information are lower than 0.7, so we cut off. Outer loading after eliminating items is shown in **Appendix F.**

Next, we found the things of Information are lower than 0.7, so we cut off INFO_5 = 0.490 (I concern about the location/environment of the production of organic products). Outer loading after eliminating item is shown in **Appendix G.**

Later, we found the ethic and animal welfare items are lower than 0.7, so we cut off E&W_2 = 0.543 (When buying the product, I consider whether the production/process of what I consume makes animals suffering). Outer loading after eliminating items is shown in **Appendix H.**

Then, we found the information items are lower than 0.7, so we cut off INFO_4 = 0.552 (I concern about the received nutrition in my daily diet). Outer loading after eliminating item is shown in **Appendix I.**

However, we found the ethic and animal welfare items are lower than 0.7, so we cut off E&W_3 = 0.562 (When buying the product, I consider whether the production/process of what I consume damages/hurts animals). Outer loading after eliminating item shown in **Appendix J.**

In addition, we found the information items are lower than 0.7, so we cut off INFO_2 = 0.576 (I compare information labels of the organic products to decide which brand to purchase). Outer loading after eliminating item shown in **Appendix K.**

Also, we found the Information items are lower than 0.7, so we cut off INFO_1 = 0.594 (I check the certification before purchasing the organic products). Outer loading after eliminating item shown in **Appendix L.** offers all items that are higher than 0.7. However, some are near 0.7. Those the expected value. After that, the discriminant validity is tested. First, in the case of discriminant validity, the relationship in their item must be more potent than different factors. So, the discriminant validity of the based model is shown in **Appendix M** with the absolute values above 0.7. Discriminant validity. It is not expected because there is a high relationship between itself and others.

However, AB found that some discriminant validity = 0.800 in terms of INFO = 0.822 and WTP = 0.837 has discriminant validity more than AB. So, we selected elimination INFO_12 (Organic milk is harmless and non-toxic) show in **Appendix N** and the loading shown in **Appendix O.** We selected elimination WTP_2 (I'm willing to pay more for organic milk) = 0.839, which is the minimum value of the item though. Finally, we got the value and discriminant validity of the based model shown in **Table 4.2** and outer loading is shown in **Table 4.3.**

Table 4.2 Discriminant validity of model

Factor	AB	COVID	E&W	HE	INFO	PBC	PR	SM	SN	WTP
AB	0.820									
COVID	0.679	0.758								
E&W	0.787	0.705	0.772							
HE	0.527	0.617	0.576	0.755						
INFO	0.799	0.608	0.743	0.453	0.798					
PBC	0.240	0.220	0.263	0.103	0.286	0.758				
PR	-0.002	-0.043	-0.003	-0.093	0.060	0.480	0.867			
SM	0.683	0.659	0.700	0.515	0.615	0.195	0.038	0.798		
SN	0.753	0.688	0.681	0.482	0.701	0.177	-0.007	0.692	0.847	
WTP	0.808	0.700	0.749	0.485	0.735	0.223	-0.037	0.638	0.783	0.888

Note. INFO : Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Table 4.3 Outer loading after eliminating all items

Construct	Item	Loading
Information	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.824
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.837
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.827
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.842
	INFO_10: Organic milk is free of genetic modification	0.708
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.743
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.737
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.736
	E&W_6: I trust the number of calories on organic milk labels	0.819
	E&W_7; I believe organic milk passes certain certification/standard	0.779

Table 4.3 Outer loading after eliminating all items. (Continued)

Construct	Item	Loading
	E&W_8: I trust the information on organic product labels	0.787
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.849
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.860
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840

Table 4.3 Outer loading after eliminating all items. (Continued)

Construct	Item	Loading
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.718
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.764
	PBC_3: Buying organic milk is highly inconvenient	0.789
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.893
	WTP_3: I'm willing to spend more time to find organic milk	0.873
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.897

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

T-statistics, which is the regression parameters result from bootstrapping. We are analyzed based on 5,000 samples of bootstrapping. The result from the algorithm shown **in Appendix C** which, the effects of 10 factors and 38 items in the model after elimination items step by step. Firstly, six items of information factors are INFO_6, INFO_7, INFO_8, INFO_9, INFO_10, and INFO_11 significant to attitude toward behavioral. Secondly, all initial COVID19 and healthy and lifestyle items were deleted, positively affecting the attitude toward behavior. Thirdly, five items of ethics and animal welfare are E&W_1, E&W_4, E&W_6, E&W_7, and E&W_8, which are stronger affected to behavioral attitudes. Next, four social media items are SM_1, SM_2, SM_3, and SM_4 effect to Subjective norms. Then two items of price are PR_1 and PR_2 significant to perceived behavioral control. Finally, all initial items of attitude toward behavior, subjective norms and perceived behavioral control positively affect willingness to purchase organic fresh milk in Thailand. Above all, the factor effect would like to report in **Table 4.4** show *t*-statistic value and *p*-value at 95% significant level with two-tail.

Table 4.4 Hypotheses test of all samples

Hypothesis	Factor effect	*t*-statistics	Result
H1	WTP → AB	8.358*	Accepted
H2	WTP → SN	6.912*	Accepted
H3	WTP → PBC	1.088	Rejected
H4	AB → INFO	9.345*	Accepted
H5	AB → E&W	6.105*	Accepted
H6	AB → COVID	3.344*	Accepted
H7	SN → SM	24.933*	Accepted
H8	AB → HE	1.179	Rejected
H9	PBC → PR	11.225*	Accepted

Note. *at significant level 0.001 **and** INFO : Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

4.2.2 The comparison between household locations

This study looks into specific comparison of willingness to purchase between the buyers in Bangkok Metropolitan Administration and other provinces. The samples are half of household location in Bangkok. In addition, the other province's surveys were Khon Kaen, Chonburi, Chiang Mai, Nakhon Ratchasima, Phuket. The summarized data of descriptive demographic are shown in **Table 4.5.**

Table 4.5 Descriptive demographic of Bangkok and other provinces

Variables	**Bangkok (n=234)**		**Other provinces (n=184)**	
	Frequency	Percentage %	Frequency	Percentage %
Gender				
Male	118	50.4	93	50.5
Female	116	49.6	91	49.5
Age (year)				
20-29	64	27.4	37	20.1
30-39	58	23.9	66	35.9
40-49	62	26.5	50	27.2
50-49	43	18.4	27	14.7
60-69	9	3.8	4	2.2

Table 4.5 Descriptive demographic of Bangkok and other provinces (Continued)

Variables	Bangkok (n=234)		Other provinces (n=184)	
	Frequency	Percentage %	Frequency	Percentage %
Education				
Under high school	10	4.3	7	3.8
High school	20	8.5	37	20.1
Vocational / Diploma	21	9.0	34	18.5
Bachelor Degree	166	70.9	96	52.2
Master Degree/ Doctoral Degree	17	7.3	19	5.4
Family annual income				
THB 0 – 300,000	54	23.1	85	46.2
THB 300,001–1,000,000	156	66.7	90	48.9
Above THB 1,000,000	24	10.3	9	4.9
Family members				
1 member	7	3.0	10	5.4
2 members	24	10.3	28	15.2
3 or 4 members	142	60.7	90	48.9
5 members or above	61	26.1	56	30.4

The result of demography a customers' household locations in Bangkok are female, around 49.6% (n=116) and male 50.4% (n=119). Furthermore, the age distribution divided seven groups with less than equal to 19 years, ten years period between 20-69, and greater than equal 70 years. Most consumers are 20 - 29 years is 27.4% group 40 - 49 years are 26.5%, and 30 - 39 years is 23.9%. For education level, around 70.9% are Bachelor's degree. Also, the group of annual salary between THB 300,001 – 1,000,000 (66.7%) and not over THB 300,000 (23.1%) and rate over THB 1,000,000 (10.3%). Furthermore, nearly 60.7% of consumers have 3-4 family members.

Another result of demography a customers' household location in other provinces is female, around 49.5% (n=93) and male 50.5% (n=91). Furthermore, more than 35.9% of the age distribution are 30 - 39 years, group 40 - 49 years are 27.2%, and 20 - 29 years is 20.1%. For education level, around 52.2% are Bachelor's degree. Also, the group of annual salary between THB 300,001 – 1,000,000 (48.9%) and not over THB 300,000 (46.2%) and rate over THB 1,000,000 (4.9%). Furthermore, nearly 48.9% of consumers have 3 - 4 family members, and the member five or above around 30.4%.

Next, the factor analysis could be compared by the SmartPLS program calculated the effecting factors. The initial model provides for 48 items into ten factors group. Finally, the results after elimination items step by step condition are shown of 39 items (Bangkok) and 38 items (Other provinces) shown in **Table 4.6.**

Table 4.6 Outer loading comparison between Bangkok samples and Other provinces samples.

Construct	Item	BKK	Other province
Information	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.834	0.797
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.828	0.814
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.851	0.789
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.834	0.814
Social media	SM_1: I see my friends often post/share health-related information on social media	0.805	0.794
	SM_2: I'm interested in health-related information on social media	0.799	0.848
	SM_3: I often post/share health-related information on social media	0.786	0.822
	SM_4: I follow health-related best practice on social media in my daily life	0.793	0.729

Table 4.6 Outer loading comparison between Bangkok samples and Other provinces samples. (Continued)

Construct	Item	BKK	Other province
Healthy and lifestyle	HE_1: I exercise every week regularly	0.698	0.642
	HE_2: I often eat healthy food	0.864	0.872
	HE_3: I want to live a healthy life as long as I can	0.668	0.745
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.803	0.768
	AB_2: Organic milk is more beneficial to my health than conventional one	-	0.769
	AB_3: Organic milk is necessary to my health	0.822	0.889
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.848	0.867
	AB_5: Organic milk is important to my daily life	0.843	0.892
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.808	0.866
	SN_2: My close friends and family consume organic milk/products	0.866	0.870
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.830	0.851
Price	PR_1: Only consumers with higher income can afford organic milk	0.899	0.912
	PR_2: Buying organic milk is beyond my budget	0.823	0.844
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.648	0.796
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.781	0.738
	PBC_3: Buying organic milk is highly inconvenient	0.823	0.742
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.893	0.888
	WTP_2: I'm willing to pay more for organic milk	0.851	-
	WTP_3: I'm willing to spend more time to find organic milk	0.842	0.871
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.874	0.911

The result of Bangkok can summarize that; seven items of information factors are INFO_6, INFO_7, INFO_8, INFO_9, INFO_10, INFO_11, and INFO_12 significant to attitude toward behavioral. Secondly, all initial COVID-19 and healthy and lifestyle items were deleted, positively affecting the attitude toward behavior. Thirdly, five ethics and animal welfare items are E&W_1, E&W_4, E&W_6, E&W_7, and E&W_8, which are stronger affected to behavioral attitudes. Next, four social media items are SM_1, SM_2, SM_3, and SM_4 effect to subjective norms. Then two items of price are PR_1 and PR_2 shown in factor loading result show in factor loading. Then two price items are PR_1 and PR_2, shown in the result, and four results of initial willingness to purchase items. Finally, four items of attitude toward behavior, three subjective norms, and three perceived behavioral control are helpful to purchase organic fresh milk.

In another group study in other provinces can summarize that; six items of information factors are INFO_6, INFO_7, INFO_8, INFO_9, INFO_1, and INFO_11, are significant to attitude toward behavioral. Secondly, all initial COVID-19 and healthy and lifestyle items were deleted, positively affecting attitude toward behavior. Thirdly, five items of ethic and animal welfare are E&W_4, E&W_6, E&W_7, and E&W_8, are stronger affected to attitude toward behavioral. Next, four social media items are SM_1, SM_2, SM_3, and SM_4, show factor loading to subjective norms. Then two price items are PR_1 and PR_2, shown in the result, and three willingness to purchase are WTP_1, WTP_3 and WTP_4. Finally, four items of attitude toward behavior, three subjective norms, and three perceived behavioral control help buy organic fresh milk. Above all, the factor effect would like to report in Table **4.15** and **Table 4.18** show *t*-statistic value and *p*-value at 95% significant level with two-tail.

After that, the discriminant validity would show the relationship in their item must be more potent than different factors. So, the discriminant validity of the based model is shown in Appendix P (Bangkok) and Appendix Q (other provinces), with absolute values above 0.7. Discriminant validity.

T-statistics, which is the regression parameters result from bootstrapping. We are analyzed it based on 5,000 samples of bootstrapping. The result of the statistic test shows in **Table 4.7.**

Table 4.7 Hypotheses test comparison between Bangkok samples and Other provinces samples

Hypotheses	Factor effect	*t*-statistics *Bangkok*	Result	*t*-statistics *other provinces*	Result
H1	WTP ⟶ AB	5.900*	Accepted	5.959*	Accepted
H2	WTP ⟶ SN	4.903*	Accepted	5.825*	Accepted
H3	WTP ⟶ PBC	1.456	Rejected	0.371	Rejected
H4	AB ⟶ INFO	7.590*	Accepted	7.176*	Accepted
H5	AB ⟶ E&W	4.773*	Accepted	3.896*	Accepted
H6	AB ⟶ COVID	0.797	Accepted	4.300*	Accepted
H7	SN ⟶ SM	21.641*	Accepted	15.530*	Accepted
H8	AB ⟶ HE	1.738	Rejected	0.236	Rejected
H9	PBC ⟶ PR	9.404*	Accepted	6.643*	Accepted

Note. 1) *at significant level 0.000 **2)** INFO : Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

4.3 Customer willingness organic fresh milk

Research has determined customer willingness to purchase organic fresh milk in different demographic groups in Thailand. Aubhalee et al. (2018) found sex, marital status, education level, monthly income, and quality were significant. Sangangamvong (2013) founded the level of income, company's employee, attitude related positively to the willingness to pay in Thailand. Besides, the difference in household location did not appear in the study. Moreover, Thailand has five regions and one central; this is very interesting to study separately by area. In the central significantly found popular the product and have many supermarkets. Therefore, it seems convenient for people to supply organic fresh milk, a unique product for some customer groups. Moreover, other regions found less of a supermarket, so this is great to look into the survey of the customer six groups, a separate respondent by Thailand's province.

The survey result found that 399 samples are willing to purchase organic milk. This group can separate the consumer who drank organic 191 selection and does not drank organic 208 samples. Moreover, a result of 313 consumers was willing to purchase and under the budget. This group found 140 consumers who drank organic milk before, and 173 did not drank organic milk. Besides, the consumers who are willing to purchase and are under budget and satisfy are 3 of a sample. Both consumers drink organic before, and the only one does not drink organic before surveying. The organic drink consumers before willing to purchase except for the satisfied and under budget conditions. The result is stunned found that most of the consumers in non-drank organic before the group (52.1%) were willing to purchase the organic. The high ratio of under budget condition more than consumer drank organic experience. The suggestion for better health, health benefits are safety, personal preferences, good value for health because it's healthy and affordable and has helped dairy farmers and an open mind to test a new product. On the other hand, the high effect suggestion example benefits are no different from regular milk, the price too high, and still not very sure about the benefits. No research-supported benefits and fresh milk are enough for consumption. The result shows that all **Figure 4.5.**

Figure 4.5 Willingness to purchase rate

The estimated price is one of the objectives of this study. So, in the questionnaire survey, add in the question to survey the expected price from the customer. For example, the question asked, "How much will you pay for organic fresh milk (per 200 c.c.)?". Therefore, the estimated price would be using the result of all consumers and show the result in **Figure 4.6.**

Figure 4.6 Estimate willingness to purchase organic fresh milk (Initial)

We found seven samples were out of control: THB 50, 70, 100,100, 100,100,100, and 200. All data out of control were eliminated errors from an estimate the price data. Therefore, all numbers will represent customers who will purchase group results shown in **Figure 4.7.**

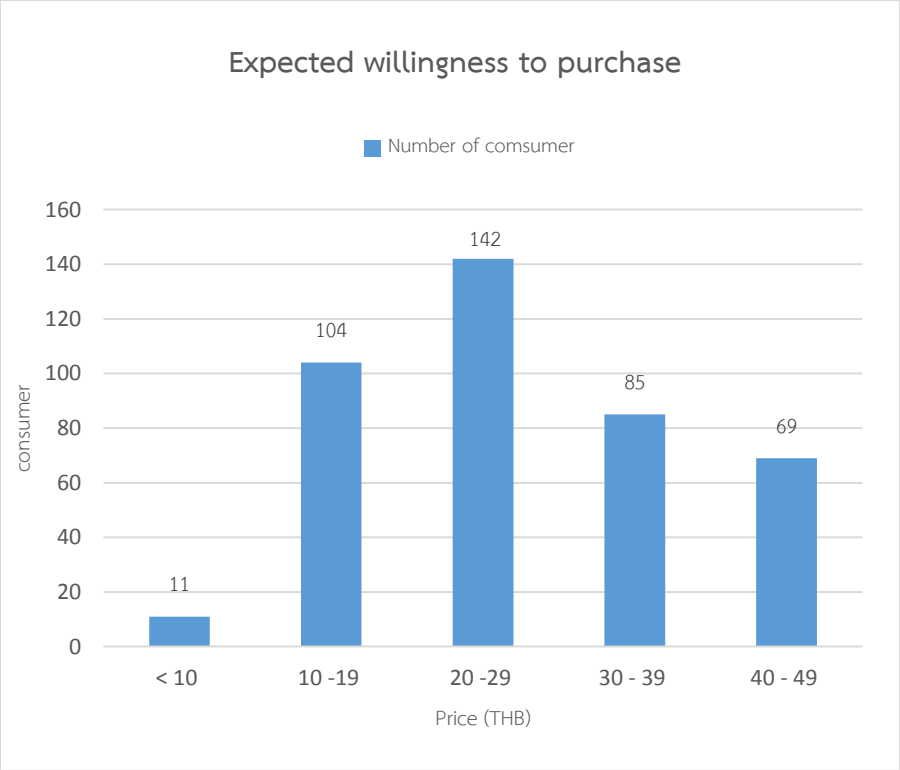

Figure 4.7 Estimate willingness to purchase organic fresh milk

Nowadays, the median price of school milk is THB 7.82 for box type sizing 200 c.c. So the summarization of price will provide a comparison with this price. Most consumers expected a willing increase between THB 12.18 – 21.18 (34.1%) and THB 2.18 - 11.18 (25%). Moreover, 20% would like to purchase between THB 22.18 – 31.18, and 16.3% expected to price between THB 32.18 and 41.18. Therefore, the result founded 2.6% want to will less than THB 2.18.

Studies inside Bangkok and other provinces willing to purchase organic fresh milk increase THB 12.18 – 21.18, around 30%. In Bangkok, there could be a difference in the willingness to acquire more THB 22.18 – 31.18 more than the other provinces group. Moreover, the customers' Bangkok group is willing to pay more for organic fresh milk than Other provinces. The result expected organic fresh milk price shown in **Figure 4.8** and **Figure 4.9.**

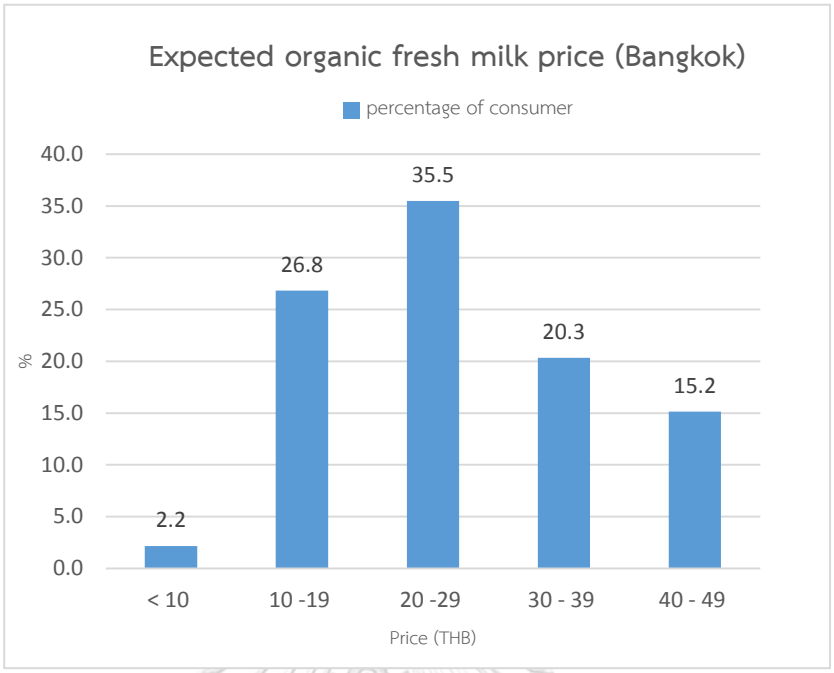

Figure 4.8 Expected organic fresh milk price (Bangkok)

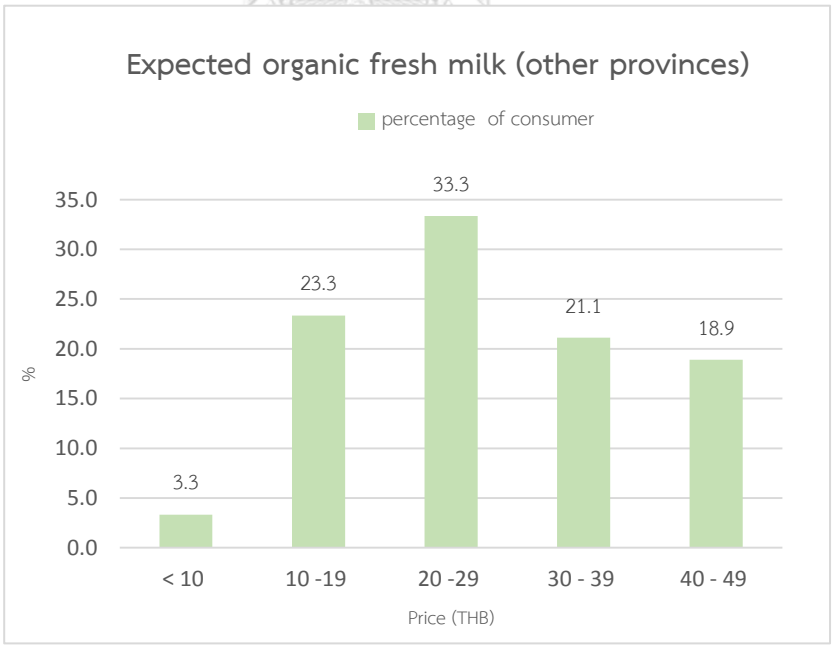

Figure 4.9 Expected organic fresh milk price (other provinces)

Chapter 5 Discussion

Since the results from the questionnaire's respondents across Thailand are summarized and indicated in Chapter 4, this chapter will explain and clarify the discussion for this research based on the two objectives.

5.1 Affecting factors in hypothesis

As the researchers have clarified the factors by using both seller's side and customers' side for the study, the second objective would identify the factors that affect the willingness to purchase organic fresh milk. The results are in consistent with the path of coefficients number respectively.

The result of algorithm **(see in Appendix C)** shows hypotheses H1 to H9 apprehending the path of coefficients (β) that represent the possible structure relationships of independence of the model. Positive values represent the direct cause-effect relationships allowed in the hypotheses. Firstly, high path is the social media impact which increases the subjective norms of hypothesis H7 (β = 0.692). In this study, subjective norms are family, close friends, and people who are connected by contacts in social media. Most consumers showed interest in health-related information on social media. Moreover, the customers posted and shared health-related data on social media while following friends' posted and shared the same information on social-media as well. In daily life, consumers tend to follow health-related best practices on social media despite the fact that social media is the most positive subjective norms.

This willingness depends on the attitude toward organic fresh milk as shown in hypothesis H1 (β = 0.497). A positive attitude will result in more purchases as well. Similarly in consistent with the relationship of attitudes in the Theory of Planned Behavior which influenced the intention of animal-friendly milk (de Graaf et al., 2016). The satisfaction on the pleasant effectiveness of organic fresh milk is higher than the conventional milk. Moreover, customers are willing to purchase organic milk under the condition of products' importance for daily life. The necessity of customers' health will influence the purchasing selection of products depending on trust and attitude.

The products representing eco-friendly attitudes are considered good ones. Also, the organic fresh milk contains higher benefits for one's health comparing to the conventional ones. On the side of the result from household location found same of statistic test significant of both groups.

In Hypothesis H9 (β = 0.480), high prices positively affect the perceived behavior control of organic fresh milk. Price significantly affected their confidence level (Li et al., 2019). More previous study found the consumers were willing to pay for organic milk at a price higher than conventional milk (Sangangamvong, 2013). Differently, the negative effect of price targets the older, highly educated, and male consumers to want organic milk in urban China (Yue et al., 2015). Most of the consumers who consider purchasing are those with high-income preferences. And the consumer accepts to pay more money if the price exceeds the budget. Thus, this study sets up a question for surveying the expected price are acceptable for consumers in order to purchase organic fresh milk in Thailand.

Hypothesis H4 (β = 0.447), the information provided in the package significantly increases the attitude toward behavior of purchasing organic fresh milk. Most consumers interested in the label information read labels to seek more information (Charlebois & Haratifar, 2015). The standard information currently provided in mainstream sales channels does not meet the rising demands for information by consumers with several of these points (Wier et al., 2008). Organic fresh milk containing more nutrients is most of the information the consumers get. Most of the labels have attached data about the higher amount of calcium than the conventional ones. Similarly, more omega 6 in organic milk effects customers' attitude. Moreover, omega 3's value in organic milk affects buyers as well. The good thing about the omega 3 and 6 are the strength of detailed information on the package. So, the consumer's attitude to select organic milk is because of the higher amount of Omega 6 and Omega 3 than conventional alternatives. Additionally, Conjugated Linoleic Acid is good for the heart for essential protection of the unhealthiness. Organic milk has more CLA amount than conventional milk. Thus, the excellent point is a benefit effecting the attitude toward behavior in product purchasing. Other most important nutrients include pesticide

residues and additives, vitamins and minerals, etc. (Wier et al., 2008). The difference is that organic milk does not contain additives and artificial flavoring in production which effect customers' comprehension. Lastly, the free of genetic modification leads to consumers' attitude toward preference over organic fresh milk. The consumers responded to milk with preferred certification labels (Yue et al., 2015). The government could help promote the effect of information on producers and support organic farming.

In Hypothesis H2 (β = 0.403), the subjective norms positively increase customers' willingness to purchase organic fresh milk. The moral norms such as close friends consuming the organic product before and acknowledge the excellent point. Moreover, significant others who expected to drink the product could also try to purchase organic milk. They heard suggestions from relatives and family to buy organic milk/food and encourage the intention to buy. The excellent experience from the norms is not bad to enforce willingness to purchase the product. Sometimes the terrible history of an illness influences willingness to select good things for themselves (Amirnejad & Tonakbar, 2018).

Hypothesis H5 (β = 0.321), ethical and animal welfare concern significantly increases the attitude toward organic fresh milk. Consumers trust the labels as they can notice the calories' organic fresh milk. The more trust in the component of the product they have, the higher the attitude toward organic milk they would have. High consumers trust the information on the label, resulting in their good attitude toward organic products in consistent with the critical thing of consumer attitudes regarding the "Fresh Milk Logo" and "organic" (Huang & Lee, 2014). The customers believing on certification or standard verify that the products reached their acceptance. Moreover, the effectiveness on consumers affects their consideration in buying environmental-friendly products. Final result from high effects on the environment and animal welfare influences good attitude and lead them to be willing to purchase the products. Therefore, the marketing team helps promote organic milk's benefits and adds more animal welfare standards (Yue et al., 2015).

In Hypothesis H6 (β = 0.153), the situation of COVID-19 significantly increases the attitude toward organic fresh milk. Most customers are aware of health and could try to find and pay for healthier food. A benefit could come from good nutrition. Thus, a positive attitude makes them buy more nutritious food such as organic milk. The milk contributes more than the information on labels and is made in Thailand. Some brands provide organic dairy from local organic farming. Moreover, if they buy agricultural products, it is good for Thai farmers also. They could also concern about the health of the family on this pandemic crisis.

Hypothesis H8 (β = 0.046) about the healthy and lifestyle, not significant increases the attitude toward organic fresh milk. Maybe the result from perhaps this question of factors is created by researchers and experts to use as part of the study, and this is its first time to use. Many consumers eat good healthy food because healthy meals may benefit them. Hence, it is not essential to attitude for this study. We found that they expect to live a healthy life as long as they are in the mood. There is a difference the decision to purchase organic food has motivated by benefits such as freshness, taste, and health benefits (Wier et al., 2008). So, there is a good thing that consumers are concerned about and are practical to exercise. Thus, healthy and lifestyle are the only factors are not affect attitude toward behavior.

Hypothesis H3 (β = 0.032), the study found that perceived behavioral control obstructs the increase of willingness to purchase organic fresh milk. May be this point of the study focuses only on an inconvenience for a buyer. The consumers who found it inconvenient to buy organic food could decide not to purchase these products. Any place of favorite stores does not sell a variety of organic fresh milk. And the limitations such as store or market to sell organic milk are only available in certain locations makes them inconvenient and affect the intention to purchase. Thus, the perceived benefits and disadvantages are the perceptions in marketing products and inconvenience for the selected product. As the perceived does not predict, it is up to personal satisfaction. Moreover, the effectiveness comes from the perceived good value could influence the intention to purchase (de Graaf et al., 2016).

5.2 Household location comparison

The result of the hypothesis path in the other provinces group shows that the high approach is social media impact increases the subjective norms of hypothesis H7 (β = 0.677) as same as the Bangkok location (β = 0.709). Second, it will depend on the attitude towards organic fresh milk as shown in hypothesis H1 (β = 0.473)—this second score part difference from a result of the Bangkok group (β = 0.498). But the range of paths same as the primary survey result of Thailand. Third, in hypothesis H9 (β = 0.452), high prices positively affect to perceived behavior control of organic fresh milk. This result difference a lower range from the Bangkok result (β = 0.509). But the range of paths same as the primary survey result of Thailand. Next, in hypothesis H2 (β = 0.447), the subjective norms positively increase customer willingness to purchase organic fresh milk. This result is a higher range from the Bangkok result (β = 0.403) and the primary survey in Thailand. Furthermore, in hypothesis H4 (β = 0.405), the information provided in the package significantly increases the attitude toward behavior range 5th in other provinces. Still, the difference is lower than the range in Bangkok (β = 0.500). Hypothesis H6 (β = 0.284) COVID-19 significantly increases the attitude this very different from the Bangkok location result. The COVID-19 not significantly increases the attitude toward behavior in terms of purchasing fresh organic milk in Bangkok (β = 0.046). This factor is not significant, but other provinces attend to COVID-19 make them concern about a positive attitude. Final of the essential factor, hypothesis H5 (β = 0.257) ethical and animal welfare concern significantly increases the attitude toward organic fresh milk—this range of lower than households in Bangkok (β = 0.323). Contrarily, the not significant factors are hypothesis H3 perceived behavioral control rejected increases willingness to purchase organic fresh milk of both groups in other provinces (β = 0.018) and Bangkok (β = 0.056). And hypothesis H8 (β = 0.014) healthy and lifestyle does not increase the attitude toward behavior as same as another group (β = 0.090).

5.3 Price estimation

This study set the second objective to estimate the willingness price of organic fresh milk in Thailand in 2021. The result found most consumers were satisfied with increasing prices ranged between THB 12.18 to 21.18. The prices are compared with the school milk price from The Announcement of The National Milk Policy Committee under the office of the Prime Minister. Because the milk sale price of private sectors is not available, the Mid-price of Ultra-high temperature (U.H.T.) of school milk is applied in this study. The price is THB 7.82 per 200 cubic centimeters in Thailand (Ministry of Agriculture and Cooperatives, 2021). The research in 2013 found that customers were willing to purchase premium quality milk for the more THB 3.87 – 4.17 per 400 cubic centimeters (Sangangamvong, 2013). Moreover, the research in 2018 found that consumers were willing to pay THB 16.25 for organic milk and THB 7.50 per glass-bottled organic milk per 200 milliliters (Aubhalee et al., 2018). In this study, the estimated price is similar to the previous researches and the customers of THB 300,000 – 1,000,000 income range could respond to these prices.

Chapter 6 Conclusion

6.1 Research conclusion

Since organic products are wholesome, salutiferous, and favorable among some groups, it is intriguing to study the trends of organic products. Yet, there is a gap of limited studies on organic milk in Thailand. Therefore, this study aims to focus on the customer's willingness to purchase organic fresh milk. Research factors used in this research are the output of TPB, customer and seller perspective from the literature review. TPB is practical for hypothesizing behavior regarding the intention of the product. This study established questionnaires based on the model were conducted to surveyed consumers in Thailand. The questionnaire survey reached 418 consumers from different household locations: Bangkok, Chiangmai, Chonburi, Nakhon Ratchasima, Khon Kaen, and Phuket. The results from PLS-SEM programming show that the attitude toward a behavior is significant; social media could recommend channeling to learn from the shared experience of norms for good practice. People could use social media to shared opinions and received the recommendation in daily life. As a result, the consumer should be willing to purchase organic fresh milk. In addition, the factors that affect attitude toward behavior are COVID-19, ethics, and animal welfare and information. We founded that COVID-19 makes customers health-conscious and willing to pay more for healthier products. They take care of the body and care about family also. When customers believe in a certification or standard in ethics and animal welfare, they are more likely to accept it—supporting that a positive impact on the environment and animal welfare leads to a positive attitude and willingness to buy the product.

Furthermore, the information such as calcium, omega 6, conjugated linoleic acid, and omega 3 in organic fresh milk is higher. As a result, the label with information about beneficial substances could affix to the positive mindset that people perceive good health in their families or acquaintances. Therefore, the expectation and suggestion to purchase from norms could help willing to purchase the organic

product/milk. Besides, customers with high-income preferences are the only ones who can afford it. Therefore, if the price exceeds the budget, the customer accepts to pay more. Moreover, the most customer accepts to positive of perceived if the price beyond the budget also. Look at terms of comparison customers between Bangkok and other provinces found a different result which COVID-19 is significant in only other provinces, which concerns the willingness to purchase healthier food in the COVID pandemic.

6.2 Limitation

Since organic products are wholesome, salutiferous, and favorable among some groups, it is intriguing to study the trends of organic products. Yet, there is a gap of limited studies on organic milk in Thailand. Therefore, this study aims to focus on the customer's willingness to purchase organic fresh milk. Research factors used in this research are the output of TPB, customer and seller perspective from the literature review. TPB is practical for hypothesizing behavior regarding the intention of the product. This study established questionnaires based on the model were conducted to surveyed consumers in Thailand. The questionnaire survey reached 418 consumers from different household locations: Bangkok, Chiangmai, Chonburi, Nakhon Ratchasima, Khon Kaen, and Phuket. The results from PLS-SEM programming show that the attitude toward a behavior is significant; social media could recommend channeling to learn from the shared experience of norms for good practice. People could use social media to shared opinions and received the recommendation in daily life. As a result, the consumer should be willing to purchase organic fresh milk. In addition, the factors that affect attitude toward behavior are COVID-19, ethics, and animal welfare and information. We founded that COVID-19 makes customers health-conscious and willing to pay more for healthier products. They take care of the body and care about family also. When customers believe in a certification or standard in ethics and animal welfare, they are more likely to accept it—supporting that a positive impact on the environment and animal welfare leads to a positive attitude and willingness to buy the product.

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6.3 Future research

Future research could develop the survey to other consumers of all provinces. The results show customers willing to purchase organic fresh milk. It is a good sign that, in the future, the value demand for organic fresh milk is likely to grow higher. In terms of producers such as farmers, stakeholders or the government could consider preparing the upgrades of organic farming. Moreover, it is easy to control and preserve dairy farming for the next generation. Now, technology develops very fast so that a person interested may apply it to revolutionize organic daily smart agriculture. There is future work that leads to supporting the rising demand shortly.

Appendix

Appendix A Survey Questionnaire Form customer (English Version)

Section 1

You should be invited to complete a research questionnaire part of Miss. Jeerawan Panwaree's dissertation on the willingness to buy organic ready-to-drink milk in Thailand. Attitudes and Suggestions, which takes about 10 minutes to complete the questionnaire.

The purpose of the questionnaire

There is to survey the personal opinions of consumers towards the purchase of organic ready-to-drink milk to develop the dairy industry further. Consistent and adequate to the needs of consumers in Thailand, your participation in this survey is voluntary. You may decline to participate in the research or leave the study at any time with no penalty

* Regarding discontinuation of research: if you have already accepted the terms once. But if you do not wish to cooperate later and stop answering questions at that time, your information will not be left behind. After transmitting the data, it cannot be deleted and destroyed, so revocation of acceptance after you have submitted the information is practically impossible.

The benefits and risks

You may not receive directly from your participation in this research survey. However, your research helps the research team learn more about consumer needs to determine the right price and develop a sustainable Thai dairy industry.

Confidentiality

Your questionnaire will be stored as an electronic document on a hard disk that any other person cannot access. This questionnaire does not store personally identifiable information such as name, email, or identifier. Anonymous and no one can go back to identify you or your answers, nor will anyone know whether you participated or participated in this survey, thus publishing any research or presentation shown. Your responses will remain confidential until this information.

* Regarding the post-complete acceptance and dissemination of research results: Research results may be published to the business administration, design, agriculture, Knowledge management includes specialized symposiums, specialized associations, international conferences, and specialized business magazines both within and outside the country related to those fields. In such cases, no identifiable information is published. The identity of the person who cooperates with the research decisively

Section 2

This section will survey age, gender, educational level, current location, number of family members, and average annual income. The question is open-ended. Choose the most approximate answer.

Screen Question

S1Q1 You are welcome to participate in the survey?

1. Do not accept
2. Accept

S2Q1 Are you someone who cannot drink milk for the following reasons?

1. No, because I can drink cow's milk.
2. Allergy
3. Religious belief
4. Other reasons

S2Q2 When you drink cow's milk at home Are you the one who bought it?

1. Never bought it myself
2. I rarely buy myself
3. Can't answer how
4. Sometimes I buy myself
5. Buy yourself regularly

Read the description of organic milk

"Organic milk is a product that is inspected and certified according to Thai organic standards. Production control about feeding to the rearing product, manufacturing/processing process. That product produced from dairy cows is raised in

a manner that minimizes the impact on the environment. It is also livestock friendly according to the principles of organic livestock production."

S3Q0 Did you know “organic milk” before reading the explanation above?”

1. No
2. I only knew the name.
3. Yes

S3Q1 Do you drink / have you ever drank organic milk? Have you ever drunk organic milk?”

1. Yes
2 .No
3. Don't know / can't remember

S3Q1s1_1 Which brand did you drink / have drank?

1. Vinamilk
2. Butterfly
3. Dairy home
4. Other (Please specify)

S3Q2 Gender

1. Male
2. Female

S3Q3 Age

1. ≤ 20 years old
2. 21–30 years old
3. 31–40 years old
4. 41–50 years old
5. 51–60 years old
6. > 60 years old

S3Q4 Education Level

1. Under high school
2. High school
3. Vocational / Diploma
4. Bachelor Degree

5. Master Degree / Doctoral Degree

S3Q5. Average family annual income (Fayossy, 2015)

1. THB 0 – 300,000
2. THB 300,001 – 1,000,000
3. Above THB 1,000,000

S3Q6 Family Size (include you)

1. 1 member
2. 2 members
3. 3 or 4 members
4. 5 members or above

S3Q7 Households with member who study without income (exclude you)

Yes (please specify) ..... person

No

S3Q8 Households with member retired or over 60 years

Yes (please specify) ..... person

No

S3Q9 Area of your household location

1. Bangkok
2. Khon Kaen,
3. Chonburi
4. Chiang Mai
5. Nakhon Ratchasima
6. Phuket

Section 3

This section will survey favorability, frequency of consumption, and expectations for purchasing organic milk. The question is open-ended. Please choose the answer that it's the most approximate. For the score, "1" Strongly Disagree "2" Disagree "3" Somewhat Disagree "4" Undecided "5" Somewhat Agree "6" Agree "7" Strongly Agree.

Q1 Organic milk is more beneficial to my health than a conventional one

Q2 I'm willing to pay more for organic milk

Q3 COVID-19 makes me buy agricultural products to support Thai farmer

Q4 Buying organic milk is highly inconvenient

Q5 When buying the product, I consider whether the production/process of what I consume makes animals suffering

Q6 I follow health-related best practices on social media in my daily life

Q7 Only consumers with higher income can afford organic milk

Q8 COVID-19 improves my willingness to buy healthier food, COVID-19

Q9 My relatives and family suggest me purchase more organic milk/food

Q10 The stores where I frequently shop do not sell a variety of organic milk

Q11 I compare information labels of the organic products to decide which brand to purchase.

Q12 I concern about additives or artificial flavoring on a label of the organic

Q13 My close friends and family consume organic milk/products

Q14 I trust the information on organic product labels

Q15 I'm willing to spend more time finding organic milk

Q16 When buying the product, I consider whether the production/process of what I consume damage/hurts animals

Q17 Organic milk has more calcium amount than conventional alternatives

Q18 Organic milk does not contain additives and artificial flavoring

Q19 I do health check-ups every year regularly

Q20 I would still buy organic milk even though conventional milk is on sale

Q21 I concern about the received nutrition in my daily diet

Q22 I want to live a healthy life as long as I can

Q23 I see my friends often post/share health-related information on social media

Q24 How much will you pay for organic fresh milk (per 200cc)? Please specify

Q25 Organic milk has more Omega 6 amount than conventional alternatives

Q26 I trust the number of calories on organic milk labels

Q27 I'm interested in health-related information on social media

Q28 My loved ones expect me to purchase more organic milk/food for them

Q29 Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives

Q30 I believe organic milk passes certain certification/standard

Q31 COVID-19 makes me concern more about the health of my family COVID-19

Q32 COVID-19 improves my willingness to pay more for healthier food COVID-19

Q33 I'm not willing to purchase organic milk*

Q34 I'm willing to buy organic milk even though choices are limited

Q35 Organic milk is only available in limited stores/markets

Q36 Organic milk is harmless and non-toxic

Q37 I exercise every week concerns (Healthy and lifestyle)

Q38 Organic milk has more Omega 3 amount than conventional alternatives

Q39 Organic milk is necessary to my health

Q40 Organic milk is free of genetic modification

Q41 When buying the product, I consider the environmental friendliness

Q42 I check the certification before purchasing the organic products

Q43 Organic milk is important to regularly health my daily life

Q44 When they are available, I prefer to buy environmentally and animal-friendly product

Q45 I believe that genetically modified foods are probably not safe for human consumption

Q46 I often eat healthy food

Q47 I concern about the location/environment of the production of organic products

Q48 Organic milk is eco-friendly

Q49 I'm willing to buy organic milk

Q50 I often post/share health-related information on social media

Q51 Organic milk satisfies/pleasants me more than a conventional one

Q52 Buying organic milk is beyond my budget

Section 4

Q53. Please explain why you buy organic milk. (or the reason you don't buy it)

Q54. Please comment on what you know heard or touched more about organic milk.

Appendix B Survey Questionnaire Form customer (Thai version)

ส่วนที่ 1 คำชี้แจง โปรดให้ความร่วมมือตอบแบบสอบถาม เฉพาะผู้ที่สามารถยอมรับรายละเอียดด้านล่างนี้ได้เท่านั้น

ท่านได้รับเชิญให้ตอบแบบสอบถามงานวิจัยซึ่งเป็นส่วนหนึ่งของวิทยานิพนธ์ของ นางสาวจีรวรรณ ปันวารี ศึกษาการเต็มใจซื้อนมออร์แกนิกพร้อมดื่มในประเทศไทย แบบสอบถามชุดนี้จะสอบถามเกี่ยวกับข้อมูลส่วนตัว ข้อมูลทั่วไปทัศนคติ และข้อเสนอแนะโดยใช้เวลาประมาณ 10 นาที ในการทำแบบสอบถาม

จุดประสงค์

แบบสอบถามมีจุดประสงค์เพื่อสำรวจความเห็นส่วนบุคคลของผู้บริโภคต่อการซื้อนมออร์แกนิกพร้อมดื่ม เพื่อนำมาต่อยอดพัฒนาอุตสาหกรรมโคนมให้สอดคล้อง และเพียงพอต่อความต้องการของผู้บริโภคในประเทศไทย

การมีส่วนร่วม

การเข้าร่วมของท่านในแบบสำรวจนี้ เป็นไปโดยสมัครใจท่านสามารถปฏิเสธที่จะมีส่วนร่วมในการวิจัยหรือออกจากแบบสำรวจได้ตลอดเวลาโดยไม่มีการลงโทษ

* เกี่ยวกับกรณีที่หยุดร่วมงานวิจัย: กรณีที่ท่านได้ยอมรับเงื่อนไขไปแล้วครั้งหนึ่ง แต่หากไม่ต้องการให้ความร่วมมือในภายหลัง และหยุดตอบคำถามในเวลานั้น จะไม่เหลือข้อมูลของท่านเอาไว้ อย่างไรก็ตามข้อมูลส่วนที่ส่งไปแล้วจะเป็นข้อมูลที่ไม่ได้ระบุตัวตน และไม่สามารถเชื่อมโยงถึงท่านได้ ดังนั้นภายหลังจากที่ส่งข้อมูลไปแล้วจะไม่สามารถลบทำลายข้อมูลส่วนนั้นได้ ดังนั้นแล้วการเพิกถอนการยอมรับภายหลังที่ท่านส่งข้อมูลไปแล้วนั้นไม่สามารถทำได้ในทางปฏิบัติ

ผลประโยชน์และความเสี่ยง

ท่านอาจจะไม่ได้รับผลประโยชน์โดยตรงจากการเข้าร่วมตอบแบบสอบถามในงานวิจัยนี้ อย่างไรก็ตามคำตอบของท่านช่วยให้ทีมวิจัยได้เรียนรู้เพิ่มมากขึ้น เกี่ยวกับความต้องการของผู้บริโภคเพื่อที่จะนำมาประเมินหาราคาที่เหมาะสม และแนวทางพัฒนาอุตสาหกรรมโคนมไทยให้ยั่งยืน

การรักษาความลับของข้อมูล

คำตอบจากการตอบแบบสอบถามของท่าน จะถูกเก็บเป็นเอกสารอิเล็กทรอนิกส์ไว้ในฮาร์ดดิสก์ที่บุคคลอื่นไม่สามารถเข้าถึงได้ แบบสอบถามนี้ไม่มีการเก็บข้อมูลที่สามารถระบุถึงตัวผู้ตอบ เช่น ชื่อ, อีเมล หรือรหัสที่ใช้ระบุตัวตน ดังนั้นแบบสอบถามของท่านไม่ต้องระบุชื่อและไม่มีใครสามารถย้อนไประบุตัวบุคคลหรือคำตอบของท่านได้รวมถึงจะไม่มีใครทราบว่าท่านเข้าร่วม หรือไม่เข้าร่วมการตอบแบบสอบถามนี้ ดังนั้นการเผยแพร่งานวิจัยหรือการนำเสนอใด ๆ ที่แสดงถึงข้อมูลนี้คำตอบของท่านจะยังคงเป็นความลับ

* เกี่ยวกับการตอบรับภายหลังเสร็จสิ้นงานวิจัยและการเผยแพร่ผลลัพธ์ของงานวิจัย: อาจมีการเผยแพร่ผลลัพธ์ของงานวิจัยไปยังสาขาบริหารธุรกิจ, สาขาออกแบบ, สาขาเกษตรกรรม, การจัดการความรู้รวมถึงงานสัมมนาวิชาการเฉพาะทาง, สมาคมเฉพาะทาง, การประชุมนานาชาติ และนิตยสารเฉพาะทางธุรกิจทั้งภายใน และภายนอกประเทศที่เกี่ยวข้องกับสาขาต่าง ๆ เหล่านั้น นกรณีเช่นนี้ ก็จะไม่มีการเผยแพร่ข้อมูลที่สามารถระบุตัวตนของผู้ให้ความร่วมมือกับงานวิจัยได้อย่างเด็ดขาด

ส่วนที่ 2 ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

ประกอบด้วย อายุ เพศ ระดับการศึกษา ที่อยู่ปัจจุบัน จำนวนสมาชิกในครอบครัว และรายได้เฉลี่ยต่อปี โปรดเลือกข้อที่เป็นคำตอบของท่าน หรือเติมข้อความลงในช่องว่างที่เว้นไว้

S1Q1 ท่านยินดีเข้าร่วมทำแบบสอบถาม

1. ไม่ยอมรับ
2. ยอมรับ

S2Q1 คุณเป็นคนที่ไม่สามารถดื่มนมได้ด้วยเหตุผลดังต่อไปนี้หรือไม่?

1.ไม่มี เพราะฉันดื่มนมโคได้
2. แพ้
3. ความเชื่อทางศาสนา
4. เหตุผลอื่น ๆ

S2Q2 เวลาท่านดื่มนมโคที่บ้าน ท่านเป็นคนซื้อเองหรือไม่

1. ซื้อเองเป็นประจำ
2. ซื้อเองเป็นบางครั้ง
3. ตอบไม่ได้ว่าอย่างไร
4. ไม่ค่อยได้ซื้อเอง
5. ไม่เคยซื้อเองเลย

โปรดอ่านคำอธิบายของนมออร์แกนิคต่อไปนี้

“นมออร์แกนิก คือ นมที่ผ่านการตรวจสอบ และรับรองตามมาตรฐานผลิตภัณฑ์อินทรีย์ของประเทศไทยในทุกกระบวนการ ตั้งแต่การให้อาหารตลอดจนถึงการเลี้ยง ขั้นตอนการผลิต/แปรรูปผลิตภัณฑ์ ซึ่งหมายถึงนมโคที่ผลิตจากโคนมที่ได้รับการเลี้ยงดูในลักษณะที่ช่วยลดผลกระทบต่อสิ่งแวดล้อมมากที่สุด และยังเป็นมิตรกับปศุสัตว์ตามหลักการผลิตปศุสัตว์อินทรีย์”

S3Q0 ท่านรู้จักนมออร์แกนิกก่อนที่จะอ่านคำอธิบายด้านบนหรือไม่

1. ไม่รู้จักมาก่อน
2. รู้จักแค่ชื่อมาก่อน
3. รู้จักคำอธิบายมาก่อน

S3Q1 ท่านเคยดื่มนมออร์แกนิกหรือไม่

1. เคยดื่ม
2. ไม่เคยดื่ม
3. ไม่ทราบ / จำไม่ได้

S3Q1s1 นมออแกนิกยี่ห้ออะไรที่ท่านเคยดื่ม (ให้ข้ามข้อนี้ไปหากไม่เคยดื่มมาก่อน)

5. วินนามิลค์ (Vinamilk)
6. บัตเตอร์ฟลาย (Butterfly)
7. แดรี่โฮม (Dairy home)
8. อื่น ๆ (โปรดระบุ)

S3Q2 โปรดบอกเพศของท่าน

1. ชาย
2. หญิง

S3Q3 โปรดบอกอายุของท่าน

1. 19 ปีหรือน้อยกว่า
2. 20 - 29 ปี
3. 30 - 39 ปี
4. 40 - 49 ปี
5. 50 - 59 ปี
6. 60 - 69 ปี
7. 70 ปี หรือมากกว่า

S3Q4 โปรดบอกระดับการศึกษาสูงสุดของท่าน

1. ระดับต่ำกว่ามัธยมปลาย
2. ระดับมัธยมปลาย
3. ระดับอาชีวศึกษา / ระดับอนุปริญญา
4. ระดับปริญญาตรี
5. ระดับปริญญาโท / ระดับปริญญาเอก
6. อื่น ๆ

S3Q5. โปรดบอกรายได้เฉลี่ยต่อปีของครอบครัวท่าน

1. 0 – 300,000 บาท
2. 300,001 – 1,000,000 บาท
3. มากกว่า 1,000,000 บาท

S3Q6 โปรดบอกจำนวนสมาชิกในครอบครัว (รวมตัวท่านเอง)

1. 1 คน
2. 2 คน
3. 3 หรือ 4 คน
4. 5 คน หรือมากกว่า

S3Q7 ครอบครัวของท่านมีสมาชิกที่กำลังศึกษาอยู่หรือไม่ (ไม่รวมตัวท่าน)

1. ไม่มี
2. มี (โปรดตอบจำนวนคน) ..... คน

S3Q8 ครอบครัวของท่านมีสมาชิกในที่เกษียณแล้ว หรืออายุมากกว่า 60 ปีหรือไม่ (ไม่รวมตัวท่าน)

1. ไม่มี
2. มี (โปรดตอบจำนวนคน) ..... คน

S3Q9 ปัจจุบันท่านอาศัยอยู่ในจังหวัดใด

1. กรุงเทพมหานคร
2. ขอนแก่น
3. ชลบุรี
4. เชียงใหม่
5. นครราชสีมา
6. ภูเก็ต
7. อื่นๆ

ส่วนที่ 3

โปรดเลือกสิ่งที่ตรงกับท่านมากที่สุด 1.ไม่เห็นด้วยมากที่สุด 2.ไม่เห็นด้วย 3.ไม่เห็นด้วยในบางครั้ง 4.เฉยๆ 5.เห็นด้วยในบางครั้ง 6.เห็นด้วย 7.เห็นด้วยมากที่สุด

Q1 ท่านคิดว่านมออร์แกนิกมีประโยชน์ต่อสุขภาพมากกว่านมทั่วไป

Q2 ท่านเต็มใจที่จะจ่ายเงินเพิ่มสำหรับนมออร์แกนิก

Q3 COVID-19 ทำให้ท่านเลือกซื้อสินค้าเกษตรเพื่อสนับสนุนเกษตรกรไทย

Q4 ท่านคิดว่าไม่ได้รับความสะดวกสบายในการหาซื้อนมออร์แกนิก

Q5 เวลาซื้อสินค้าท่านพิจารณาว่าสินค้าที่ท่านซื้อมีการทรมานสัตว์ในขั้นตอนกระบวนการผลิตหรือไม่

Q6 ท่านติดตามและปฏิบัติตามแนวทางที่ดีที่สุดเกี่ยวกับสุขภาพบนสื่อสังคมออนไลน์

Q7 ท่านคิดว่าเฉพาะผู้บริโภคที่มีรายได้สูงเท่านั้นที่สามารถซื้อนมออร์แกนิกได้

Q8 COVID-19 ช่วยเพิ่มความเต็มใจต่อการซื้ออาหารที่มีประโยชน์สูงขึ้นของท่าน

Q9 ญาติหรือคนในครอบครัว แนะนำให้ท่านซื้อนม/ผลิตภัณฑ์ออร์แกนิก

Q10 ท่าคิดว่าร้านค้าประจำของท่านจำหน่ายนมออร์แกนิกไม่หลากหลาย

Q11 ท่านเปรียบเทียบฉลากข้อมูลของผลิตภัณฑ์ออร์แกนิกเพื่อตัดสินใจว่าจะซื้อแบรนด์ใด

Q12 ท่านกังวลเกี่ยวกับสารปรุงแต่ง หรือสารแต่งกลิ่นสังเคราะห์ บนฉลากสินค้าออร์แกนิก

Q13 เพื่อนสนิท และคนในครอบครัวบริโภคนม/ผลิตภัณฑ์ออร์แกนิก

Q14 ท่านเชื่อถือข้อมูลที่ระบุบนฉลากที่ติดอยู่บนผลิตภัณฑ์นมออร์แกนิก

Q15 ท่านเต็มใจที่จะใช้เวลาขึ้นในการหาสถานที่จำหน่ายนมออร์แกนิก

Q16 เวลาซื้อสินค้า ท่านพิจารณาว่าสินค้าที่ท่านซื้อมีการผลิตหรือกระบวนการที่ทำร้ายสัตว์หรือไม่

Q17 ท่านคิดว่านมออร์แกนิกมีคุณค่าของแคลเซียมมากกว่านมโคทั่วไป

Q18 ท่านคิดว่านมออร์แกนิกไม่มีสารปรุงแต่งและสารแต่งกลิ่นสังเคราะห์

Q19 ท่านตรวจสุขภาพประจำปีเป็นประจำทุกปี

1. ใช่
2. ไม่ใช่

Q20 ท่านคิดว่าจะเลือกซื้อนมออร์แกนิกแม้ว่าจะมีนมโคทั่วไปอื่น ๆ ลดราคาอยู่

Q21 ท่านกังวลเกี่ยวกับคุณค่าทางโภชนาการในอาหารที่รับประทานในแต่ละวัน

Q22 ท่านต้องการมีชีวิตที่มีสุขภาพดีเท่าที่จะเป็นไปได้

Q23 ท่านสังเกตุเห็นเพื่อนของท่านโพสต์ / แชร์ข้อมูลด้านสุขภาพบนสื่อสังคมออนไลน์บ่อย ๆ

Q24 โปรดระบุจำนวนเงินซึ่งท่านเต็มใจที่จะซื้อนมออร์แกนิกปริมาณ 200 ซีซี

1. น้อยกว่า 10 บาท
2. 10 – 19 บาท
3. 20 –29 บาท
4. 30 – 39 บาท
5. 40 – 49 บาท
6. มากกว่า 50 บาท
7. อื่น ๆ

Q25 ท่านคิดว่านมออร์แกนิกมีคุณค่าของโอเมก้า 6 (Omega 6) มากกว่านมโคทั่วไป

Q26 ท่านเชื่อว่าปริมาณแคลอรี่ที่ได้รับจากนมออร์แกนิกตามที่ระบุบนฉลาก

Q27 ท่านให้ความสนใจข้อมูลด้านสุขภาพบนสื่อสังคมออนไลน์

Q28 ท่านคิดว่าคนที่ท่านรักคาดหวังให้ท่านซื้อนม/ผลิตภัณฑ์อาหารออร์แกนิกให้พวกเขามากขึ้น

Q29 นมออร์แกนิกมีคุณค่าของ กรดซีแอลเอ (Conjugated Linoleic Acid) มากกว่านมโคทั่วไป

Q30 ท่านคิดว่านมออร์แกนิกผ่านการรับรอง/มาตรฐานจริง

Q31 COVID-19 ทำให้ท่านกังวลเรื่องสุขภาพของครอบครัวของท่านมากขึ้น

Q32 COVID-19 ช่วยเพิ่มความเต็มใจจ่ายสำหรับอาหารที่มีประโยชน์ในราคาที่มากขึ้น

Q33 ท่านไม่เต็มใจที่จะเลือกซื้อนมออร์แกนิก*

1. ใช่
2. ไม่ใช่

Q34 ท่านเต็มใจที่จะซื้อนมออร์แกนิกแม้ว่าจะมีตัวเลือกจำกัด

Q35 ท่านคิดว่านมออร์แกนิกถูกจำกัดการจำหนายในร้านค้า/ตลาดบางแห่งเท่านั้น

Q36 ท่านคิดว่านมออร์แกนิกเป็นสินค้าที่ไม่เป็นอันตรายและไม่เป็นพิษต่อร่างกาย

Q37 ท่านออกกำลังกายเป็นประจำทุกสัปดาห์

Q38 ท่านคิดว่านมออร์แกนิกมีคุณค่าของโอเมก้า 3 (Omega 3) มากกว่านมโคทั่วไป

Q39 ท่านคิดว่านมออร์แกนิกมีความจำเป็นต่อสุขภาพของท่าน

Q40 ท่านคิดว่านมออร์แกนิกไม่มีการดัดแปลงพันธุกรรม

Q41 เวลาซื้อสินค้าท่านพิจารณาว่าสินค้านั้นคำนึงถึงสิ่วแวดล้อมหรือไม่

Q42 ท่านตรวจสอบฉลากรับรองก่อนซื้อผลิตภัณฑ์ออร์แกนิก

Q43 ท่านคิดว่านมออร์แกนิกมีความสำคัญต่อชีวิตประจำวันของท่าน

Q44 หากเป็นไปได้ ท่านชอบซื้อสินค้าที่เป็นมิตรต่อสิ่งแวดล้อมและสัตว์มากกว่าสินค้าอื่น ๆ

Q45 ท่านคิดว่าอาหารดัดแปลงพันธุกรรมไม่ปลอดภัยสำหรับต่อการบริโภคของมนุษย์

Q46 ท่านมักจะเลือกรับประทานอาหารที่ดีต่อสุขภาพ

Q47 ท่านกังวลเรื่องสถานที่หรือสภาพแวดล้อมของกรรมวิธีในการผลิตสินค้าออร์แกนิก

Q48 ท่านคิดว่านมออร์แกนิกเป็นมิตรกับสิ่งแวดล้อม

Q49 ท่านเต็มใจที่จะเลือกซื้อนมออร์แกนิก

1. ใช่
2. ไม่ใช่

Q50 ท่านมักจะโพสต์/แชร์ข้อมูลด้านสุขภาพบนสื่อสังคมออนไลน์

Q51 ท่านคิดว่าพึงพอใจนมออแกนิกมากกว่านมโคทั่วไป

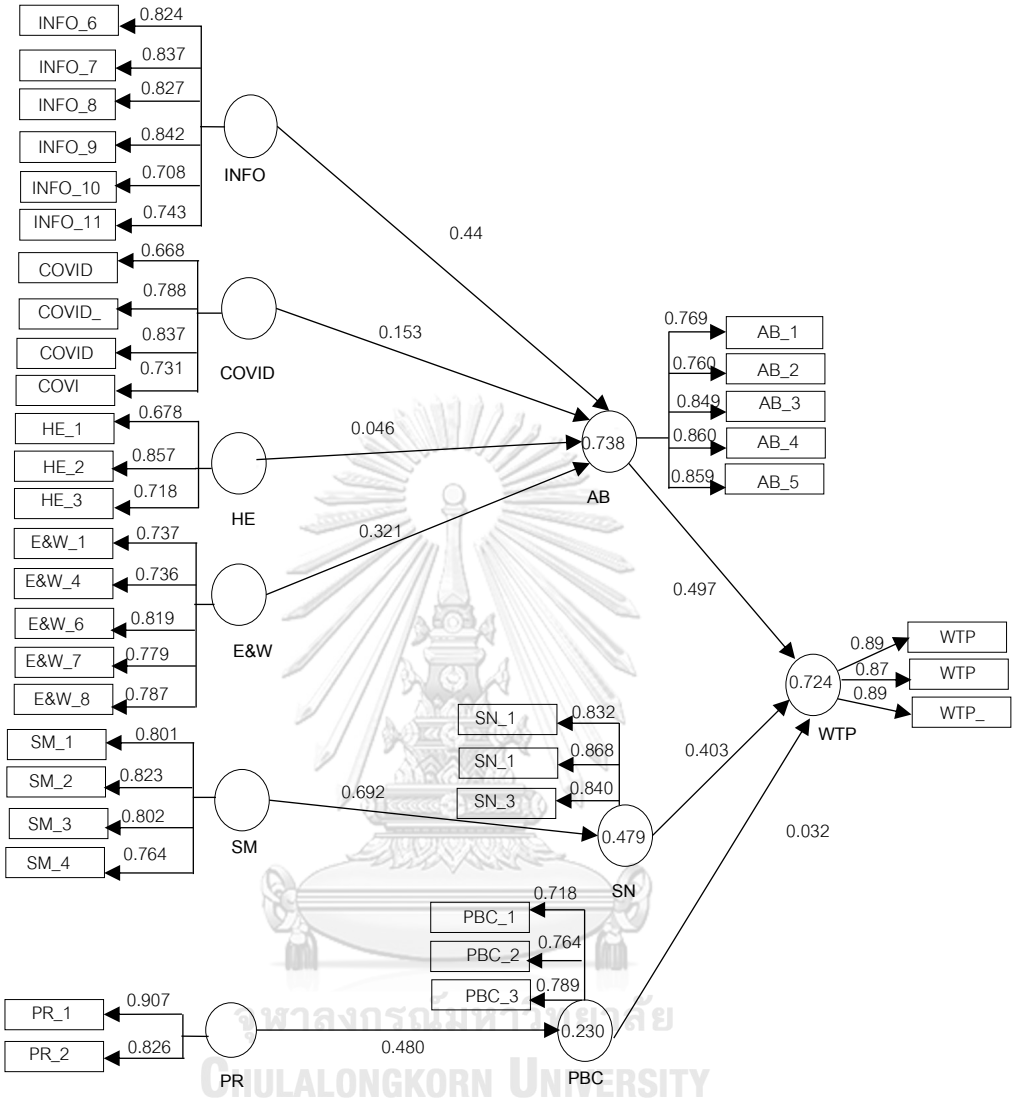
Q52 ท่านคิดว่าการซื้อนมออร์แกนิกทำให้เกินงบค่าใช้จ่ายของท่าน

ส่วนที่ 4

Q53. โปรดอธิบายเหตุผลที่ท่านซื้อนมออร์แกนิก (หรืออเหตุผลที่ท่านไม่ซื้อ)

Q54. โปรดแสดงความคิดเห็นเรื่องที่ได้รู้จัก ได้ยินหรือได้สัมผัส เกี่ยวกับนมออร์แกนิก อื่นๆ เพิ่มเติม

Appendix C The figure of algorithm the framework



Note. INFO : Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Appendix D Outer loading for initial items

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.629
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.601
	INFO_3: I concern about additives or artificial flavoring on a label of the organic products	0.447
	INFO_4: I concern about the received nutrition in my daily diet	0.575
	INFO_5: I concern about the location/environment of the production of organic products	0.508
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.779
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.773
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.789
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.768
	INFO_10: Organic milk is free of genetic modification	0.689
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.725
	INFO_12: Organic milk is harmless and non-toxic	0.672
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.743
	E&W_2: When buying the product, I consider whether the production/process of what I consume makes animals suffering	0.546
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	0.622
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.728
	E&W_5: I believe that genetically modified foods are probably not safe for human consumption	**0.401**
	E&W_6: I trust the number of calories on organic milk labels	0.782
	E&W_7; I believe organic milk passes certain certification/standard	0.730
	E&W_8: I trust the information on organic product labels	0.747
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668

Appendix D Outer loading for initial items (Continued)

Construct	Item	Loading
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.860
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix E Outer loading after eliminating E&W_5

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.629
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.601
	INFO_3: I concern about additives or artificial flavoring on a label of the organic products	**0.447**
	INFO_4: I concern about the received nutrition in my daily diet	0.575
	INFO_5: I concern about the location/environment of the production of organic products	0.508
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.779
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.773
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.789
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.768
	INFO_10: Organic milk is free of genetic modification	0.689
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.725
	INFO_12: Organic milk is harmless and non-toxic	0.672
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.745
	E&W_2: When buying the product, I consider whether the production/process of what I consume makes animals suffering	0.543
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	0.617
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.734
	E&W_6: I trust the number of calories on organic milk labels	0.788
	E&W_7; I believe organic milk passes certain certification/standard	0.740
	E&W_8: I trust the information on organic product labels	0.751
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837

Appendix E Outer loading after eliminating E&W_5 (Continued)

Construct	Item	Loading
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.860
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix F Outer loading after eliminating INFO_3

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.625
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.590
	INFO_4: I concern about the received nutrition in my daily diet	0.564
	INFO_5: I concern about the location/environment of the production of organic products	**0.490**
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.787
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.779
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.796
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.777
	INFO_10: Organic milk is free of genetic modification	0.693
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.725
	INFO_12: Organic milk is harmless and non-toxic	0.679
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.745
	E&W_2: When buying the product, I consider whether the production/process of what I consume makes animals suffering	0.543
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	0.617
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.734
	E&W_6: I trust the number of calories on organic milk labels	0.788
	E&W_7; I believe organic milk passes certain certification/standard	0.740
	E&W_8: I trust the information on organic product labels	0.751
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837

Appendix F Outer loading after eliminating INFO_3 (Continued)

Construct	Item	Loading
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.860
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix G Outer loading after eliminating INFO_5

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.622
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.585
	INFO_4: I concern about the received nutrition in my daily diet	0.552
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.793
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.787
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.800
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.781
	INFO_10: Organic milk is free of genetic modification	0.694
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.730
	INFO_12: Organic milk is harmless and non-toxic	0.688
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.745
	E&W_2: When buying the product, I consider whether the production/process of what I consume makes animals suffering	**0.543**
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	0.617
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.734
	E&W_6: I trust the number of calories on organic milk labels	0.788
	E&W_7; I believe organic milk passes certain certification/standard	0.740
	E&W_8: I trust the information on organic product labels	0.751
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731

Appendix G Outer loading after eliminating INFO_5 (Continued)

Construct	Item	Loading
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix H Outer loading after eliminating E&W_2

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.622
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.585
	INFO_4: I concern about the received nutrition in my daily diet	**0.552**
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.793
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.787
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.800
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.781
	INFO_10: Organic milk is free of genetic modification	0.694
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.730
	INFO_12: Organic milk is harmless and non-toxic	0.688
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.748
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	0.562
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.740
	E&W_6: I trust the number of calories on organic milk labels	0.800
	E&W_7; I believe organic milk passes certain certification/standard	0.759
	E&W_8: I trust the information on organic product labels	0.775
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731

Appendix H Outer loading after eliminating E&W_2 (Continued)

Construct	Item	Loading
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix I Outer loading after eliminating INFO_4

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.619
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	0.576
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.799
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.795
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.806
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.798
	INFO_10: Organic milk is free of genetic modification	0.697
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.732
	INFO_12: Organic milk is harmless and non-toxic	0.689
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.748
	E&W_3: When buying the product, I consider whether the production/process of what I consume damage/hurts animals	**0.562**
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.740
	E&W_6: I trust the number of calories on organic milk labels	0.800
	E&W_7; I believe organic milk passes certain certification/standard	0.759
	E&W_8: I trust the information on organic product labels	0.775
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801

Appendix I Outer loading after eliminating INFO_4 (Continued)

Construct	Item	Loading
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.770
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix J Outer loading after eliminating E&W_3

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	0.619
	INFO_2: I compare information labels of the organic products to decide which brand to purchase.	**0.576**
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.799
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.795
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.806
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.798
	INFO_10: Organic milk is free of genetic modification	0.697
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.732
	INFO_12: Organic milk is harmless and non-toxic	0.689
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.737
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.736
	E&W_6: I trust the number of calories on organic milk labels	0.819
	E&W_7; I believe organic milk passes certain certification/standard	0.779
	E&W_8: I trust the information on organic product labels	0.787
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802

Appendix J Outer loading after eliminating E&W_3 (Continued)

Construct	Item	Loading
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.770
	AB_2: Organic milk is more beneficial to my health than conventional one	0.759
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix K Outer loading after eliminating INFO_2

Construct	Item	Loading
Information	INFO_1: I check the certification before purchasing the organic products	**0.594**
	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.812
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.805
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.810
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.807
	INFO_10: Organic milk is free of genetic modification	0.707
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.739
	INFO_12: Organic milk is harmless and non-toxic	0.687
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.737
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.736
	E&W_6: I trust the number of calories on organic milk labels	0.819
	E&W_7; I believe organic milk passes certain certification/standard	0.779
	E&W_8: I trust the information on organic product labels	0.787
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764

Appendix K Outer loading after eliminating INFO_2 (Continued)

Construct	Item	Loading
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.770
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.849
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix L Outer loading after eliminating INFO_1

Construct	Item	Loading
Information	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.816
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.815
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.816
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.821
	INFO_10: Organic milk is free of genetic modification	0.713
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.746
	INFO_12: Organic milk is harmless and non-toxic	**0.679**
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.737
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.736
	E&W_6: I trust the number of calories on organic milk labels	0.819
	E&W_7; I believe organic milk passes certain certification/standard	0.779
	E&W_8: I trust the information on organic product labels	0.787
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718

Appendix L Outer loading after eliminating INFO_1 (Continued)

Construct	Item	Loading
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.770
	AB_2: Organic milk is more beneficial to my health than conventional one	0.760
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.859
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix M Discriminant validity of based model

Factor	AB	COVID	E&W	HE	INFO	PBC	PR	SM	SN	WTP
AB	**0.820**									
COVID	0.679	0.758								
E&W	0.787	0.705	0.772							
HE	0.527	0.617	0.576	0.755						
INFO	**0.822**	0.633	0.767	0.479	0.774					
PBC	0.241	0.221	0.264	0.103	0.294	0.758				
PR	-0.001	-0.043	-0.003	-0.093	0.047	0.479	0.867			
SM	0.683	0.659	0.700	0.515	0.622	0.195	0.038	0.798		
SN	0.753	0.688	0.681	0.482	0.719	0.177	-0.007	0.692	0.847	
WTP	**0.837**	0.700	0.749	0.485	0.765	0.227	-0.052	0.652	0.792	0.862

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Appendix N Discriminant validity of model

Factor	AB	COVID	E&W	HE	INFO	PBC	PR	SM	SN	WTP
AB	**0.820**									
COVID	0.679	0.758								
E&W	0.787	0.705	0.772							
HE	0.527	0.617	0.576	0.755						
INFO	0.799	0.608	0.743	0.453	0.798					
PBC	0.214	0.221	0.264	0.103	0.287	0.758				
PR	-0.001	-0.043	-0.003	-0.093	0.060	0.479	0.867			
SM	0.683	0.659	0.700	0.515	0.615	0.195	0.038	0.7890		
SN	0.753	0.688	0.681	0.482	0.701	0.177	-0.007	0.692	0.847	
WTP	**0.837**	0.700	0.749	0.485	0.750	0.227	-0.052	0.652	0.792	0.862

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Appendix O Outer loading after eliminating INFO_12

Construct	Item	Loading
Information	INFO_6: Organic milk has more Omega 3 amount than conventional alternatives	0.824
	INFO_7: Organic milk has more Omega 6 amount than conventional alternatives	0.837
	INFO_8: Organic milk has more CLA (Conjugated Linoleic Acid) amount than conventional alternatives	0.827
	INFO_9: Organic milk has more calcium amount than conventional alternatives	0.842
	INFO_10: Organic milk is free of genetic modification	0.707
	INFO_11: Organic milk does not contain additives and artificial flavoring	0.743
Ethic and animal welfare	E&W_1: When buying the product, I consider the environmental friendliness	0.737
	E&W_4: When they are available, I prefer to buy environmentally and animal friendly product	0.735
	E&W_6: I trust the number of calories on organic milk labels	0.819
	E&W_7; I believe organic milk passes certain certification/standard	0.779
	E&W_8: I trust the information on organic product labels	0.787
COVID-19	COVID_1: COVID-19 makes me concern more about health of my family	0.668
	COVID_2: COVID-19 improves my willingness to buy healthier food	0.788
	COVID_3: COVID-19 improves my willingness to pay more for healthier food	0.837
	COVID_4: COVID-19 makes me buy agricultural products for support Thai farmer	0.731
Social media	SM_1: I see my friends often post/share health-related information on social media	0.801
	SM_2: I'm interested in health-related information on social media	0.823
	SM_3: I often post/share health-related information on social media	0.802

Appendix O Outer loading after eliminating INFO_12 (Continued)

Construct	Item	Loading
	SM_4: I follow health-related best practice on social media in my daily life	0.764
Healthy and lifestyle	HE_1: I exercise every week regularly	0.678
	HE_2: I often eat healthy food	0.857
	HE_3: I want to live a healthy life as long as I can	0.718
Attitude toward behavior	AB_1: Organic milk is eco-friendly	0.769
	AB_2: Organic milk is more beneficial to my health than conventional one	0.761
	AB_3: Organic milk is necessary to my health	0.848
	AB_4: Organic milk satisfies/pleasants me more than conventional one	0.860
	AB_5: Organic milk is important to my daily life	0.859
Subjective norm	SN_1: My relatives and family suggest me to purchase more organic milk/food	0.833
	SN_2: My close friends and family consume organic milk/products	0.868
	SN_3: My loved ones expect me to purchase more organic milk/food for them	0.840
Price	PR_1: Only consumers with higher income can afford organic milk	0.907
	PR_2: Buying organic milk is beyond my budget	0.826
Perceived behavioral control	PBC_1: Organic milk is only available in limited stores/markets	0.719
	PBC_2: The stores where I frequently shop do not sell a variety of organic milk	0.766
	PBC_3: Buying organic milk is highly inconvenient	0.787
Willingness to purchase	WTP_1: I'm willing to buy organic milk even though choices are limited	0.887
	WTP_2: I'm willing to pay more for organic milk	0.839
	WTP_3: I'm willing to spend more time to find organic milk	0.842
	WTP_4: I would still buy organic milk even though conventional milk is on sale	0.880

Appendix P Discriminant validity of model (Bangkok)

Factor	AB	COVID	E&W	HE	INFO	PBC	PR	SM	SN	WTP
AB	0.829									
COVID	0.588	0.763								
E&W	0.775	0.651	0.771							
HE	0.524	0.563	0.535	0.748						
INFO	0.810	0.562	0.747	0.470	0.783					
PBC	0.235	0.161	0.227	0.064	0.232	0.754				
PR	0.018	-0.078	0.001	-0.086	0.067	0.509	0.862			
SM	0.629	0.627	0.673	0.497	0.608	0.174	0.090	0.796		
SN	0.721	0.679	0.678	0.500	0.709	0.189	0.045	0.709	0.835	
WTP	0.801	0.650	0.744	0.460	0.757	0.248	-0.005	0.637	0.772	0.865

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

Appendix Q Discriminant validity of model (Other provinces)

Factor	AB	COVID	E&W	HE	INFO	PBC	PR	SM	SN	WTP
AB	0.839									
COVID	0.764	0.756								
E&W	0.781	0.736	0.801							
HE	0.550	0.670	0.621	0.759						
INFO	0.804	0.696	0.758	0.462	0.785					
PBC	0.231	0.276	0.283	0.124	0.363	0.759				
PR	-0.045	0.002	-0.046	-0.096	0.026	0.452	0.879			
SM	0.727	0.694	0.717	0.540	0.633	0.213	-0.029	0.799		
SN	0.768	0.694	0.674	0.460	0.715	0.148	-0.075	0.677	0.862	
WTP	0.821	0.738	0.713	0.479	0.744	0.194	-0.079	0.644	0.813	0.890

Note. INFO: Information; HE : Healthy concern; E&W: Ethic and animal welfare; COVID : COVID-19; SM : Social media; AB : Attitude toward Behavior; SN : Subjective Norms; PBC : Perceived behavioral control; WTP : Willingness to purchase organic fresh milk

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VITA

NAME	Jeerawan Punwaree
DATE OF BIRTH	22 August 1989
PLACE OF BIRTH	Chiangmai, Thailand
INSTITUTIONS ATTENDED	Chiang Mai University
HOME ADDRESS	289/1 Lamlukka, Pathum Thani 12130